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DIES IRAE.

That day, a day of wrath, a day of trouble and distress, a day of wasteness and desolation, a day of darkness and gloominess, a day of clouds and thick darkness, a day of the trumpet and alarm against the fenced cities, and against the high towers.— *Zeph. i, 15, 16.*

I.

O DAY of wrath! In that dread day,
Both Psalmist and the Sybil say
That earth shall melt in flames away.

II.

Ah, me! what trembling there will be,
When every eye the Judge shall see
Descend to make strict scrutiny!

III.

The last shrill trump with wondrous sound,
Through the sepulchral regions round,
Startles the dead from sleep profound!

IV.

Nature and Death, as they arise
And press unto the grand assize,
Behold with overwhelmed surprise.

V.

The Book of Doom is opened then;
Wherein, with an unerring pen,
Are writ the deeds of sinful men.

VI.

The Judge unfolds its pages bright,
And, bringing hidden things to light,
Does every evil work requite.

VII.

Ah! what shall wretched I then plead?
Who then for me will intercede,
When e'en the Just forgiveness need?

VIII.

King of tremendous majesty,
Who savest with salvation free,
O Fount of Pity, save thou me!

IX.

Think how, dear Lord, thou didst resign
The glories of thy state divine,
That thou mightest make those glories mine!

X.

Thou satedst wearied, seeking me;
Redeemedst, hangedst on the tree,
Let not in vain such labour be!

XI.

O thou just Judge of recompense,
Absolve me from each dark offence,
Ere to thy bar thou call'st me hence!

XII.

My conscious guilt arrests my prayer;
The flush of shame my crimes declare:
Oh! let me thy sweet mercy share.

XIII.

Thou who did'st hear the dying thief:—
Absolvedst Mary in her grief:—
Can'st save e'en me, of sinners chief!

XIV.

No price I bring, no merit claim;
My only trust is in thy name;
Save me from the undying flame!

XV.

When, parting at thy dread command,
The crowd divides on either hand,
Grant me among thy sheep to stand!

XVI.

While all the wicked unforgiven
Are into endless torments driven,
Call me with the blest to heaven!

XVII.

Low in the dust I suppliant lie;
My contrite heart as ashes dry;
Comfort thou me when death is nigh!

XVIII.

Alas the day! that day of Ire!
When, rising from their funeral pyre,
The countless dead of ages past
Shall stand before the Judge aghast!

Ah! how shall guilt that reckoning bear?
Spare us, O God, in mercy spare!

From the British Quarterly Review.

- (1.) *History and Practice of Photogenic Drawing.* By L. J. M. DAGUERRE. 1839.
- (2.) *On the Application of the Chemical Rays of Light to the Purposes of Pictorial Reproduction.* By Sir J. F. W. HERSCHEL, K.H., F.R.S.
On the Action of the Rays of the Solar Spectrum on Vegetable Colours, and on some New Photographic Processes. By the Same.
On Certain Improvements on Photographic Processes, and on the Parathermic Rays of the Solar Spectrum. By the Same.
Philosophical Transactions, 1839-43.
- (3.) *Researches on Light in its Chemical Relations.* By ROBERT HUNT, F.R.S. Second Edition. 1854.
- (4.) *The Journal of the Photographic Society.* Edited by H. W. DIAMOND, M.D., F.S.A. Vols. I.-X. 1853-66.
- (5.) *The Photographic News.* Edited by G. WHARTON SIMPSON, M.A. Vols. I.-IX. 1858-65.
- (6.) *The Year-Book of Photography.* 1861-66.
- (7.) *The Total Eclipse of the Sun, July 18th, 1860.* By WARREN DE LA RUE, F.R.S. (Proceedings of the Roy. Soc., April, 1862.)
- (8.) *Traité de l'Impression Photographique ans Sels d'Argent.* Par ALPHONSE POITEVIN. 1862.
- (9.) *Traité Général de Photographie.* Par D. V. MONKHOVEN. Cinquième Edition. 1865.
- (10.) *L'Art de la Photographie.* Par DISDERI. 1862.
- (11.) *Principles and Practice of Photography.* By JABEZ HUGHES. Sixth Edition. 1865.
- (12.) *Photography: Its History, Position, and Prospects.* A Lecture. By the Hon. J. WILLIAM STRUTT. 1865.
- (13.) *Researches on Solar Physics.* By WARREN DE LA RUE, Ph.D., F.R.S.; BALFOUR STEWART, M.A., F.R.S.; and BENJAMIN LOEWY. 1865.

WITH photography as a prominent fact of the day, essentially belonging to the nineteenth century, everybody is familiar. Its origin, growth, and variety of application have had no parallel in the history of the graphic and pictorial arts. But notwithstanding that its results are to be found in every part of the civilized globe, amongst the most cherished treasures of every home,

that it is the recognized, unerring recorder of science, the auxiliary of the law, the willing assistant of the painter and the sculptor, for whom it does yeoman's service, the art itself is without a history. The records of its first days, although scarcely reaching beyond the present generation, are meagre and fragmentary. To the initial facts upon which it is based we find occasional allusions as early as the sixteenth century, some of the alchemists regarding solar action as one source of the transmutation of metals, a conclusion doubtless derived from their observation that chloride of silver, known to them as *luna cornua*, was changed in colour by the rays of the sun. A century later, in 1777, the illustrious chemist, Scheele, records some interesting experiments on the same properties in this salt; but his discoveries remained dead facts, without application; and it was not until the commencement of the present century that the possibility of drawing by sunlight assumed a definite shape in men's minds.

In 1802, Thomas Wedgwood, the son of the celebrated potter, published in the Journal of the Royal Institution 'An account of Method of Copying Paintings upon Glass, and of making Profiles by the Agency of Light upon Nitrate of Silver;' 'Observations,' by Sir Humphry Davy, who had assisted in the experiments, accompanying the paper. In the brief but interesting record of their experiments, after learning that 'muriate of silver' was found to be more sensitive than nitrate of silver, that white leather when prepared was more sensitive than paper, and that although the images of the camera obscura could not be secured in any moderate time, yet those of the solar microscope could be copied on prepared paper without difficulty, we also learn the fatal fact, that 'no attempts that have been made to prevent the uncoloured parts of the copy or profile from being acted upon by light have as yet been successful.' They had discovered but half the spell; the pictures could not be fixed. The agency they had invoked continued its work until the images first produced by its aid were destroyed by its continued action, and a blackened sheet of paper was all that remained. Although these efforts were unsuccessful, and the idea seemed for some time abandoned, yet from this time we find the science of the sunbeam gaining increased attention, and the Transactions of the Royal Society and other learned bodies began to furnish trustworthy records of the researches into the chemical action of the solar rays, which initiated photography as a science,

and immediately preceded its advent as an art.

It is somewhat curious to note that, whilst the actual history of photography is a thing of yesterday, we find premonitions of such a mode of delineation at a period long anterior to its existence, either as a fact or a subject of research. In Fénelon's *Fables*, under the title of 'Voyage Supposé, 1690,' a visit to the Island of Wonders is described, a country in which no painter dwelt, but when a portrait or picture was desired, the reflection of the object was obtained in a liquid placed in gold or silver vessels; the water shortly congealed and retained permanently the image which had been mirrored on its surface.* In 1760, Tiphaigne de la Roche, in a singular book, with a title anagrammatized from his own name into *Giphantie à Bobylone*, supposed himself transported into the palace of the genii of the elements, and there learns that these genii can arrest and retain the reflected images of objects made in the 'twinkling of an eye.' Cloth was prepared with a subtle adhesive material, which shone like a mirror, and possessed the power to retain on its viscons surface the momentary images reflected there, and being dried in the dark the picture became ineffaceable. The problems involved in such a method of securing the fleeting images of objects, the dreamer proposed for the solution of the philosophers of his day.†

It is not a little noteworthy, however, that whilst photography as a fact dates back little more than a quarter of a century, photography as a possibility, at least in the phases in which it is now known and practised, is

confined to a period scarcely less recent, as almost all the elements employed in the first step taken in obtaining a photograph—the production of the negative—are of recent discovery. The sensitive salts, without the aid of which a negative is impossible, consist of iodides and bromides, and the now indispensable vehicle is collodion; chlorides being now used only in the secondary operation of printing. Iodine, the primary element, was unknown until 1812, when it was discovered by M. Courtois, of Paris. Bromine, an imperatively necessary aid to successful work, was not discovered until 1826, whilst collodion is a still younger child of chemical science. Other of the agents commonly used in photography are of recent origin; but these we have mentioned are the very bases on which the art rests, not simply in its existing modes, but in any form we know in which it could be used as the accurate registrar of transient effects, or to secure pictures of objects in life and motion. Thus photography, as a practical fact, came into existence almost as soon as the agents upon which its practice depends were known to science.

Before noticing its most recent developments, a brief glance at the first definite stages in the history of this new art-science may be desirable. The experiments of Wedgwood and Sir Humphry Davy closed without leaving any more tangible result than the indication of a wondrous possibility. To a recluse philosopher residing at Châlons-sur-Saône, however, the first realization of this possibility was given. Joseph Nicéphore de Niepce commenced his labours in 1814, with a view to give a permanent embodiment to the fleeting images of the camera obscura. Led by what suggestions or inducements we know not, his researches were directed to a channel totally different from that to which his predecessors had given attention. They had experimented with certain salts of silver: he turned his attention to the behavior of certain resins when submitted to the action of light. Dr. Wollaston had, in 1803, discovered that gum guaiacum was singularly sensitive to the action of the solar ray; but no practical result had flowed from his discovery. The amateur chemist at work in his quiet laboratory at Châlons, steadily laboured at the problem he sought to solve, until success crowned his effort, and he finally produced the first sun pictures which were not of a fleeting character, and in which the productive cause, light, did not in its turn become the destructive agency. His process has since been superseded, but the principle he dis-

* "Il n'y avait aucun peintre dans tout le pays, mais quand on voulait avoir le portrait d'un ami, un beau paysage, ou un tableau, qui représentât quelque autre objet, on mettait à l'eau dans de grande bassins d'or et d'argent; puis on opposait cette eau à l'objet qu'on voulait peindre. Bientôt l'eau, se congelant, devenait comme une glace de miroir, ou l'image demeurait ineffaçable. On l'emportait on l'on voulait, et c'était un tableau aussi fidèle que les plus poli glaces de miroir."—Les Fables de Fénelon.

† "It is curious to observe, in passing, the frequency of these coincidences, or poetic provisions of scientific discovery. The anticipatory allusions of Darwin to the advent of steam have been often quoted. In a number of the *Guardian*, issued a century and a half ago (Tuesday, July 28th, 1713), there is an account cited of a 'Chimerical Correspondence between two friends by the help of a certain loudstone which had such a virtue in it, that if it touched two several needles, the other, though at ever so great a distance, moved at the same time and in the same manner as a dial-plate provided with letters, to which the needles might point, which enabled the friends to communicate with each other instantly, and hold conversation when separated by continents. The similarity between this conception and the actual working of the electric telegraph is almost startling.

covered, and the materials he employed, are the bases of one of the most recent developments of the art. Ten years appear to have elapsed before Niepce succeeded, his first permanent pictures being produced in 1824. The method he employed in his process, which he named heliography, consisted in forming a picture of asphaltum upon a surface of polished metal. The asphaltum, or bitumen of Judæa, according to the first published instructions, was dissolved in the essential oil of lavender, and spread upon a tablet of metal, — polished silver, although pewter appears to have been also used, as we have ascertained from a personal examination of some of the few examples of his work still in existence. This prepared tablet was placed in the camera, the luminous image being projected on its surface. After an exposure of some hours, during which little or no apparent change had taken place, the prepared surface was again submitted to the action of a solvent, consisting of a mixture of the essential oil of lavender and of the oil of white petroleum. The action of this mixture was very curious: where no light had acted, the bitumen was dissolved readily and removed from the metal, but wherever it had been submitted to a strong light its properties were changed; it was no longer soluble in the menstruum which had before acted on it readily, and an image answering in depth to the various intensities of the light to which it had been submitted was produced. The sun had undertaken the office of draughtsman, as he was before known to be a colourist. Newton had indicated that all the gorgeous hues of nature were due to the decomposition of white light: that all the beauty, all the gladness, all the 'holiness,' as Ruskin has phrased it, of colour in the universe, was due to the varied reflection by various surfaces of an infinity of mixtures of the three primary rays, red, blue, and yellow, which, when combined, form a beam of white light. But now the sun had become draughtsman, and had given a permanent form to the images he had hitherto only transiently created in the camera.

In 1827, having attained a high degree of success, Niepce visited England, and resided for some time at Kew. His great aim was to bring his discovery under the attention of the Royal Society, to whom he forwarded some account of his researches, together with various specimens, some of which had been submitted to the action of an etching fluid to indicate the possibility of photographic engraving. A rule of the Royal Society, and, it must be admitted, a

wholesome one for general practice, here interposed a barrier to the consummation of the hopes of the scientific enthusiast. He wished to preserve his secret; and the Society could not receive or pass any opinion upon a secret process. Saddened at such a termination to a long-cherished project, M. Niepce returned in 1828 to Chalons, there to find consolation in a fresh devotion to his experiments. His process was never, however, to come into general practice. Ten years afterwards, when he had been sometime dead, his nephew and successor, who zealously prosecuted these yet unfinished experiments, when writing to Daguerre, who had been working to the same end by different means, and had by this time made his great discovery, said, 'What a difference between the method which you employ and the one by which I toil on! While I require almost a whole day to make one design, you — you ask only four minutes.' Nevertheless Niepce had discovered some of the great principles which underlie photography, and upon which subsequent practice has been based. Some of the heliographs of Niepce are in the British Museum; but the examples of his process are not numerous in this country.

In the meantime M. Daguerre, a French artist who had acquired considerable celebrity in the painting and management of dioramic effects, had in the year 1824 devoted his life to the realization of a dream which had taken possession of him, — the perpetuation of those images the camera presented to him whilst studying nature for his dioramic paintings. He, as well as Niepce, worked in secrecy: each feared that a whisper of his great project should reach the world, and that he should be forestalled in the great discovery. In the year 1826, however, from the indiscretion of an optician employed by Daguerre, this aim of the visionary painter was made known to the enthusiastic chemist who had so long pursued a similar object. In the correspondence which ensued we have some singular glimpses of the caution and reticence with which they compared notes of their labours. In 1829 they entered into some kind of alliance or partnership in their great pursuit, a certain caution still characterizing their interchanges of experience. In 1832, some years after the establishment of this partnership, we find Niepce writing to Daguerre referring to the use of iodine, which he had employed, but with a different aim, some years before: — 'May I entreat of you to tell me, at your earliest convenience, how you employ it? Whether it is

in a solid form, or in a state of solution in a liquid? 'Daguerre's pictures were produced on iodised silver plates: by what steps he arrived at this discovery, and at what period success crowned his efforts, we have no certain record. That he pursued his labours with a zeal inexplicable to the matter-of-fact people by whom he was surrounded, and that he was more fortunate in his domestic relations than was Bernard Pallisy, the potter, we have reason to believe. Nevertheless, we hear of Daguerre's wife consulting a medical friend on the symptoms of insanity in her husband which such a devotion to a chimera implied. That he pursued his labours somewhat empirically we have also reason to believe, groping with more sagacity than knowledge, supported in his efforts by that high faith in an unseen possibility which is often born of strong desire. A history of the processes of thought, and the experimental efforts of a comparatively unscientific man in conducting such an investigation, and the grounds of the faith which sustained him through years of fruitless search for an unknown thing in an unknown region, would have been most interesting and instructive. His greatest discovery appears to have been the result of happy chance. Working with plates of silver which had been submitted to the fumes of iodine, he strove to obtain an image on the camera which should be visible and permanent. Heart-sick with disappointment, he put away in a cupboard which contained a heterogeneous assemblage of chemicals—his broken spells and fruitless charms—the tablets which bore no record of the image to which they had been submitted on the camera. Taking up one of these tablets one day in order to clean it and recommence experiments upon it, to his surprise he found a perfectly delineated picture thereon. The circumstance was incomprehensible: no picture had been there when the plate was put away: but here in its minutest detail was the image to which the plate had been submitted. The operation was repeated with like success. A few hours in the magic cupboard produced a picture on the iodised tablet which showed no trace of anything of the kind before. After long and puzzling search, a vessel containing mercury, a substance which slowly vaporises at the ordinary temperature of the atmosphere, was found to be the cause. The action of light on the iodide of silver, although not made apparent by any visible change, had actually impressed a latent image on the surface, sufficient to determine the deposition of the vapours of mercury on

certain parts where light had acted, and thus bring out or develop a picture. We can understand at this stage of his researches the earnestness with which he wrote to Niepce urging him to experiment with iodine, although afraid to say how much he had himself already discovered. At length complete success was attained: a certain means of arresting and retaining the beautiful but hitherto evanescent transcripts of nature presented by the camera obscura was discovered, and it only remained to the happy discoverer to bring it before the public and receive his reward.

In January, 1839, the discovery of M. Daguerre was first announced to the world, and specimens of the results were exhibited, the *modus operandi* being still preserved secret. The French Government at once entertained the project of rewarding the discoverer, and in the following June a bill received the Royal assent which gave to M. Daguerre a pension of 6,000 francs annually, and to M. Niepce, jun., a pension of 4,000 francs annually, that the new art might be presented a gift to the world. The savans of France were elate alike at the novelty and brilliancy of the discovery. Two of the most distinguished men of the time appeared as sponsors for the youngest and most beautiful child of science. M. Arago, in the Chamber of Deputies, and M. Gay Lussac, in the Chamber of Peers, introduced the subject with glowing eloquence. M. Arago was pre-eminently enthusiastic on the aid which such a power would lend to science. 'To copy,' he said, 'the millions and millions of hieroglyphics which entirely cover, to the very exterior, the great monuments at Thebes, Memphis, Carnac, &c., would require scores of years, and legions of artists. With the Daguerrotype a single man would suffice to bring to a happy conclusion this vast labour.' M. Paul Delaroche declared that the pictures carried to 'such perfection certain of the essential principles of art, that they must become subjects of study and observation, even to most accomplished artists.'

Thus in the month of August, 1839, the new discovery was published to the world. It was received with enthusiasm, and rapidly adopted as a means of delineation, portraiture being its most early and extensive application. England alone failed to partake freely of this 'gift to the world,' M. Daguerre having entered into negotiations which secured a patent in this country whilst the question of his claims was under the attention of the French Government.

Daguerrotypes have now passed out of

public attention, and the process is no longer practised. Possessed of exquisite beauty, and a delicacy of gradation unequalled by the results of any other process, these pictures had one essential drawback: the image being depicted on a polished reflecting surface, produced an unpleasant shimmer which rendered its examination difficult except when held in certain positions.

Notwithstanding that many improvements were made with which the names of Claudet—to whose scientific researches photography is much indebted—Goddard, Fizeau, and others were associated, and by which the Daguerrotype process acquired a high degree of perfection, from causes yet to be glanced at, this method of delineation has fallen entirely into disuse; and it is doubtful whether, at the present day, it is practised in any part of the world.

With the strange coincidence which has often characterised the history of invention, whilst an experiment for the production of sun pictures was in progress in France, a series of experiments with the same end, but by essentially different means, was progressing independently and without knowledge or concert in this country, the results of which have chiefly formed the basis of the present practice of photography. In 1834, Mr. Fox Talbot commenced a series of experiments in the reproduction of images of natural objects, chiefly botanical specimens, by the action of light on the salts of silver; and on the 31st of January, 1839, six months earlier than the publication of the Daguerrotype process, he read a paper before the Royal Society on what he termed 'Photogenic Drawing.' The method he adopted was to treat writing paper with a solution of common salt, and subsequently with a solution of nitrate of silver, the reaction between the two substances forming chloride of silver, the salt known to be sensitive to light. Lace, leaves, ferns, &c., laid upon such paper and exposed to light, produced a light image on a dark ground, all their markings being produced with such accuracy, that a *fac simile* which, to quote the paper which appears in the 'Transactions of the Society,' 'would take the most skilful artist days or weeks of labour to trace or to copy, is effected by the boundless powers of natural chemistry in the space of a few seconds.'

It was in the course of these experiments that Mr. Fox Talbot made the important discovery upon which the very existence of photography in a large proportion of its applications depends—the possibility of indefinite multiplication of any number of

copies from one cliché or negative. A brief statement of the origin of the discovery will best explain the meaning of the word *negative*. It will readily be seen that if a piece of paper be prepared so that its surface becomes blackened when exposed to light, and any object, such as the frond of a fern, be placed upon it, that portion covered by the fern will be protected from the light except where the object is partially transparent, the light acting through such parts just in the proportion to the transparency of the object. The ground of the paper will become black, and the image of the object will be lighter in tint. If the object to be copied were dark in colour, this result was manifestly imperfect, and it became necessary to adopt some remedy. This soon presented itself: it was only needed to place another piece of sensitive paper under the picture first obtained, and again expose it to the light; and the sun's rays penetrating quickly through the light image but with difficulty through the dark ground, a picture was obtained with the reverse conditions, it was a dark image on a light ground. The first was styled, scarcely happily, a *negative*, because its lights and shades were reversed, and the second in which there was no inversion of light and dark was styled a *positive*. If the image were obtained in the camera or solar microscope, of course the same effect was produced. Where the strongest light acted, the silvered paper was most darkened; and so in less degree in proportion to gradation of light, the light and shade being inverted in the image first produced by light; and the result was a negative. The negative at first produced became thus the source from which to print any number of positives. The negative thus stands in the position of an engraved plate, from which a large number of prints can be produced. Its printing qualities depend on the varying degrees of opacity or transparency it possesses. Where the brightest light is in the original object, there the negative is blackest and most opaque, where in the object there are the darkest shadows or deepest blacks, the negative is most transparent, the half-tones being represented by semi-transparency. In printing, the prepared paper is found to be impressed with a picture possessing a variety of gradations from pure white to deep black, corresponding to the gradations in opacity found in the negatives. This capacity of multiplication is the corner-stone of modern photography. Beautiful as was the Daguerrotype process, it possessed no such power. Each picture produced by its

aid was the result of a distinct operation, requiring the presence of the original object. The pictures so produced might have been more prized for their rarity, but the art could never have acquired so much importance as a branch of industry as it now possesses, arising out of this capacity of almost unlimited multiplication from one negative.

Mr. Fox Talbot was not alone in his photographic researches in this country. After the lapse of thirty years another generation of experimentalists had taken up the quest which had been abandoned by Wedgwood and Davy as hopeless. Amongst these the Rev. J. B. Reade was one of the most successful. He had succeeded, some time before Mr. Talbot made public his experiments, in securing the images of the solar microscope, as well as images by superposition of the original on a prepared surface. To him, it appears, is due the first use of gallic acid, an important agent in the Calotype process. Remembering that Davy had found white leather treated with the silver salt more sensitive than paper, Mr. Reade had recourse to this material for his experiments. Restrained at length in his frequent incursions on the stock of white kid gloves of a lady of his family, the palms of the gloves having materially aided his researches, it occurred to him to treat paper with the material with which he supposed the leather to be dressed, and a solution of nut-galls, which was found an important accelerator, was forthwith employed in all his operations. This agent, which was subsequently of the utmost importance as a *developer*, or means of giving visible form to latent image, was only employed at first as an accelerator, to facilitate the more rapid production of a vigorous picture. Incidents occurred in Mr. Reade's experiments similar to that we have mentioned in Daguerre's researches. One day engaged in producing on sensitive paper an image of the *Trientalis Europæa*, by superposition, he was compelled to abandon the attempt before the exposure had produced any impression. The paper which was thrown aside in the dark without any trace of a picture, was found next day to possess a fully developed image, the continued action of the gallic acid and silver salt, with which the paper was impregnated, completing the reduction commenced by light.

We may pause here to give something more than an incidental notice to one of the most wonderful and beautiful facts in the history of science, we refer to the production and development of a latent image: an image produced by the action of light,

truly and definitely existing in every detail, but invisible to the most searching examination with the highest microscopic power; yet capable of springing into visible being on the slightest contact with a reducing agent. We have seen that Daguerre had by accident discovered that a latent or invisible image existed, after exposure in the camera, on the iodised silver plate, which the fumes of mercury were unable to develop. Reade had also discovered the fact that an image had been produced by the continued operation in the dark of the agents with which his paper was impregnated. But the discovery of a fact and its recognition as demonstrating the existence of a principle, are widely different things. The existence of a latent image was revealed by accident: the knowledge or conjecture of such a fact could not possibly have been attained by any process of *a priori* argument. It was not only unknown, but was without an analogy in the whole range of science. But the existence of things unseen once demonstrated in one process, it was an easy leap to a logical mind to arrive at a conviction that the same fact would obtain in other processes. Mr. Fox Talbot, whose researches at first had been chiefly confined to what he termed *photogenic drawing*, or the production of images of objects by superposing them on paper prepared with chloride of silver and exposing the paper to light, now gathered together the fragmentary facts which had been ascertained, and by these compacted a beautiful system well worthy of its name—the Calotype process. Sir John Herschel had in the meantime employed iodide of silver as more sensitive than chloride of silver. Mr. Reade had used gallic acid; and M. Daguerre had discovered that a latent image was produced by a short exposure to the action of light, which could be subsequently developed by a suitable agent: Out of these facts, by an inductive process of reasoning, Mr. Fox Talbot created his Calotype process, which was patented in 1841, the first photographic process which was perfect in all its parts, and which, notwithstanding the progress of the art since then, is the analogue in every point of the process used to-day. A principle once established, modifications and improvements followed rapidly, and a variety of important processes were introduced, into the details of which it is not necessary to enter here.

Before quitting this part of the history of photography, there is another interesting point to notice. We have seen that the first experimentalists were compelled to

abandon their quest because they were unable to fix the pictures they had produced: they had no means of checking the action of light when it had produced the desired image. The surface which was sufficiently sensitive to the action of light to darken where it was required to produce a picture, continued to darken all over when the picture was examined in daylight. The first thing to be ascertained by the new race of explorers in this domain of science was a means of removing the sensitive salts from the paper as soon as the picture was formed, so that light should no longer act upon the surface. Solvents for the salts of silver were at the time comparatively unknown. Scheele had dissolved chloride of silver in ammonia, but it does not seem to have occurred to the first experimentalists to use ammonia as a fixing agent. Had they done so, however, the practical difficulties attending its use must have prevented its extended application to the purpose. Daguerre, Reade, and Talbot appear to have used a saturated solution of common salt for the purpose of fixing the picture, an office which it only very imperfectly performed. In his patent of 1841, Mr. Fox Talbot refers to the use of bromide of potassium for the same purpose. It is to Sir John Herschel the art is indebted for its first perfect fixing process. In 1819 this philosopher contributed to the *Edinburgh Philosophical Journal* a paper describing the action of the hyposulphites, especially noting their power to dissolve the 'muriate of silver.' In January, 1839, stimulated by reports of the discovery of Daguerre, whose process was still a secret, Sir John Herschel devoted some time to photographic experiment, with considerable success, and produced the first print fixed with hyposulphite of soda, the material in use up to the present day.

For some years after the perfecting of the Calotype method, this process and that of Daguerre divided the realm of photographic art equitably between them. A new era was, however, shortly to arrive, when both methods were eclipsed by a process which combined the beauties of each without the defects of either.

In the year 1851, the details of the Collodion process were published in a periodical named *The Chemist*, which has long since ceased to exist. Perfect in principle as the Calotype process was regarded, the materials employed were felt to have many defects. The fibrous texture of paper was a trouble. As the light in passing through the negative in the operation of printing registered with accuracy every irregularity in the texture of

the paper upon which the negative had been taken, the print often suffered in delicacy. Sir John Herschel had early in the history of the art, suggested the use of glass for the negative in the place of paper. But it was not until 1848 that an available method of employing it was devised, when M. Niepce St. Victor employed a film of albumen on a plate of glass as the vehicle for the sensitive salts of silver. The results were beautiful, but the process was troublesome, and the exposure protracted. Collodion, a newly discovered viscous fluid, was suggested as a suitable vehicle for the sensitive salts by M. Le Gray. About the same time (1850) Mr. Bingham employed this substance, and recorded its suitability. But it was not until the publication of a practical process with working details by Mr. W. Scott Archer, that general attention was called to the subject. This gentleman was fortunately associated in his early experiments with Dr. Hugh Diamond, to whose executive skill the excellence of the first results and the introduction to the world of the Collodion process in a tolerably practical form were largely due.

It was evident that such a process must effect a revolution in the art. In simplicity there was no comparison between this and former methods. In delicacy of delineation and freedom from texture or the structural markings of paper, it left nothing to desire. In rapidity of receiving impressions it was marvellous, the operation being, under favourable conditions, literally concluded in the twinkling of an eye. In the improvements effected since the first introduction of photography, the exposure had been reduced from hours to minutes: it was now reduced from minutes to seconds, whilst the results far surpassed anything which had preceded them. It was evident a new era had dawned on the art, of which its present extended applications are but the natural development.

Before noticing some of the more important recent applications of photography, it may be well to glance for a moment at the present practice of the art, and at the principles upon which it is based. We should premise that practice in this art has always been in advance of theory; which, in reference to some points, is still matter of controversy amongst chemists and physicists. All the methods of producing photographic negatives, and the most usually practised methods of producing prints from the negatives, are based upon the action of light on haloid salts of silver, which tends to split the salt into its elements, liberating

the halogen, and reducing the silver to its metallic state. Other salts of silver, organic and inorganic, exhibit the same characteristics, but in less marked degree. The silver, which is reduced by the action of light, forms the photographic image, whether negative or positive. Much controversy has existed from the beginning as to the nature of this photographic image, and the precise action of light on the haloid salts of silver, to which we shall again advert. It is necessary to remark in passing, that whilst light is usually spoken of as the chief agent in photography — as indeed the very name of the art implies — it is, nevertheless, not to light properly so called, but to actinism that the photographer is indebted for his power to produce pictures. It was noticed by Scheele, that chloride of silver was blackened more readily in the violet ray than in other portions of the solar spectrum. This question, which has been the subject of most exhaustive research by Sir John Herschel, is of vital importance in photography. Not only is the violet ray more active than the other rays, but a portion of the more refrangible rays, extending beyond the violet, which are invisible to the eye, are found to be highly actinic. This actinic power decreases as the other end of the spectrum is approached, and the orange and yellow rays are found to possess no actinic power whatever. Upon this fact much of the practice of photography is based. If all light were equally active in impressing the salts of silver, all manipulations with a sensitive surface must be conducted in absolute darkness, a condition which would render useful work impossible. As, however, yellow light has no chemical action on the photographic tablet, the operations of the photographer can be carried on in a room illuminated with yellow light without risk to the sensitive surface.

Collodion, which is used simply as a vehicle for holding the sensitive salts, and is itself chemically inert, consists of a solution of pyroxyline, in a mixture of ether and alcohol. The pyroxyline suitable for the preparation of collodion differs from that used for explosive purposes in containing a less proportion of peroxide of nitrogen: it is less explosive and more soluble than gun cotton proper. When dissolved in the proportion of about one per cent. in a mixture of equal parts of sulphuric ether and rectified spirit, a clear, transparent, slightly viscous varnish is produced, which, when poured on a plate of glass and dried, leaves a thin, transparent, tough, waterproof film.

To render the collodion available in photography, it is charged with about one per cent. of a mixture of iodides and bromides. A plate of glass being coated with this preparation is plunged into a solution of nitrate of silver containing about seven per cent. of that salt. This operation is, of course, performed in what is technically called the dark room, although it is freely illuminated with yellow, or non-actinic light. The film of collodion, which was allowed to set, but not to dry, before immersing in this solution, is readily permeated by it, and a double decomposition ensues in the film, in which the iodide and bromide part with the bases with which they are united, and combine with their equivalent proportions of silver. The latter having left the nitric acid with which it was combined, the acid unites with the bases which have left the bromine and iodine, and forms nitrates which remain in the solution harmless, but playing no part in the operation. The layer of bromo-iodide of silver thus formed is now very sensitive to the chemical action of light, and an exposure for a few seconds to the luminous image of the camera obscura produces a latent image which the application of a 'developing solution,' consisting of a deoxygenizing agent, renders visible, by reducing the silver to a metallic state wherever light has acted.

The nature of the change produced by the impact of light on the sensitive surface perplexes profound chemists, and has, as we have before remarked, been the subject of much discussion from the earliest days of the art-science, and remains still undecided. The sensitive plate presents a semi-opaque yellowish white layer of iodide and bromide of silver, in contact with a certain amount of the nitrate of silver solution in which the plate has just been submerged. After exposure to the light no change is visible; the most minute microscopic examination discovers no alteration in the appearance of the film: such analysis as is possible has hitherto failed to discover a chemical change. Nevertheless, the light, wherever it has acted, has been sufficient to determine the formation of a vigorous image, on the application of the developer. Two theories of the mode of operation have been advanced. One asserts that the action of light is purely chemical, and that a real although incipient decomposition is set up, a portion of the iodine and bromine being liberated. The chemical decomposition thus set up, it is asserted, is completed by the developer, and, wherever light has acted, the halogen is finally driven off, and

the silver reduced to a metallic state. The other theory is, that the action of light is physical, — that it produces such a disturbance in the molecules of iodide and bromide of silver, as determines the reduction, on application of the developer, not of the iodide and bromide of silver, but of the free nitrate of silver in contact with it, and it is from the free nitrate, it is alleged, that the image of reduced silver is formed. That the action of light, when prolonged, effects a complete chemical decomposition in the case of bromide and chloride of silver, there cannot be a doubt: whether the same result follows in the case of iodide of silver is less certain. The inquiry is full of matter of curious scientific interest, and the experiments by which each view has been supported have revealed some singular phenomena, to which we may on a future occasion make reference.

Leaving the theoretical considerations for the present, let us glance once more at the practical details of modern photography, which bring us into contact with one of those mysterious processes of nature which, in its sudden revelation of things unseen, seems almost creative in its operations. The glass tablet, which we have already described as coated with a sensitive film of salts of silver, is submitted for a few seconds to the image of an object — say of a beautiful face — formed in the camera obscura. No light has reached the tablet but the light reflected from that face. This light is, however, the photographer's familiar spirit, by whose aid he is potent in creating a world of shadows. Let us adjourn to the dark room, and see if his Ariel has been 'correspondent to command.' Over the apparently virgin surface of the tablet the photographer pours an acid solution of protosulphate of iron. He watches in silence; he mutters no 'abracadabra;' he puts forth no 'charm of woven paces and of waving hands;' but he exercises a mightier magic than ever necromancer dreamed of. He gives embodiment to the *vera effigies* of that beautiful face, not as imperfectly imitated by the limner, but as projected on the tablet by the light reflected from it, literally fixing the image of the mirror. Oliver Wendell Holmes, in one of his delightful essays, affects to discover in photography an explanation of the classic fable in which Marsyas is flayed by Apollo, after the young shepherd had been beaten in a musical contest with the god of music. Mr. Holmes suggests that the god of song is also the god of light, and that he fastened Marsyas to a tree — the head-rest of the

photographer — and took a sun-picture of him, the thin film or skin of light and shade projected directly from his body to the sensitive tablet having been by uninstructed persons interpreted as the *cutis* of the young shepherd. Certain it is, that the identical ray of light which, proceeding from the sun to the face to be portrayed, and actually touching it, is projected on the surface of the sensitive tablet, produces the image. As soon as the revealing solution is applied, that image springs into visible being: first the strongest lights on the polished forehead or the lace which surrounds the neck appear; then the lights on the shining tresses, and gradually the less illuminated portions, until every detail is developed, no freckle missed, no scar unrecorded. The image is there, in the silver liberated from its compounds, not in a bright metallic form, but in an amorphous mass of dark particles. It is now only necessary to remove the layers of unchanged iodide or bromide of silver which have not been necessary to form the image, by immersion in a solution of hyposulphite of soda, and the negative is completed, and is ready for the production of thousands of positive prints.

The process we have described is that by which the best results can be produced, and is therefore in common use. For the purposes of the landscape photographer, who wishes to avoid the inconvenience of a portable laboratory or dark tent, it has been the aim to employ what are termed dry processes, in which the plate, prepared at home, and packed in its dark receptacle ready for exposure, might be easily carried, without adding much to the travelling impedimenta of the tourist. Numerous difficulties, however, attend the operation, the history of the attempts to overcome which would fill a large volume. The free nitrate of silver in solution removed from the plate, necessary in preparing the dry plate, must be replaced by some organic body having the power to combine with the iodine liberated by the action of light, and a variety of substances have been tried with varying success. The dry processes appear to have been, with few exceptions, chiefly the domain of the empiric, and comparatively little real progress has been made. The first dry method proposed, in which albumen was employed as an auxiliary to collodion, is still, in various modifications, the most successful and most commonly used system in dry plate photography.

The usual operation of printing is a simple one. It is, in fact, but a modifica-

tion of that first practised by Talbot in his photogenic drawing. For the purpose of giving delicacy of detail and brilliancy to the image, it is customary to print upon paper which has received a varnish of albumen containing the soluble chloride, which by double decomposition with nitrate of silver forms the sensitive chloride of silver on the surface of the paper, an organic compound of silver being at the same time formed by the contact of the nitrate solution and the albumen. Paper so prepared, and exposed under a negative to the action of light, is darkened in the degree which light penetrates through the various parts of the negative, and produces an image. The colour of the reduced silver is generally at this stage pleasing; but after the print has been submitted to the action of hyposulphite of soda it assumes an unpleasant foxy tint. In the early days of photography, this image was often improved in colour by converting it into a black sulphide of silver; but what it gained in beauty it lost in stability. Various improvements were effected in this respect, and the present practise is to submit the picture to the action of a solution of chloride of gold, when a decomposition ensues in which a portion of gold displaces a portion of the silver, and produces the purple tint of gold in a fine state of subdivision. This adds to the beauty and permanency of the photograph, gold being less liable to change under various atmospheric influences than silver. After this an immersion in hyposulphite of soda, and thorough washing, to remove all traces of the fixing salt, finish the operation.

It is, however, from this operation of fixing that the chief danger to photographs arises. The stigma of mutability has been the one drawback upon photography. However beautiful, however useful, its products, the knowledge that they may and probably will fade, robs them of much of their worth; and this probability is caused by the action set up by the fixing bath of hyposulphite of soda.

This bath of hyposulphite of soda is beset with dangers in every stage, and is perpetually liable to changes which set up decompositions causing the formation of sulphur compounds of silver, which effectually injure, and finally destroy the photograph. When the fixation is properly effected, it is necessary to remove, by washing, the fixing salts; but these cling with such persistency that many hours' constant change of water, applied by a variety of ingenious machines, scarcely suffice for their entire removal, and any traces remaining are an additional ele-

ment of instability. It has been recently proposed to submit the washed print to the action of an oxidizing agent, such as a solution of peroxide of hydrogen or hypochlorite of soda, by which any trace of hyposulphite of soda would be converted into sulphate, which would be more easily removed by washing, or less liable to injurious decomposition if left in the picture. The action of these agents in producing a higher state of oxidation on the hyposulphite is interesting, and may possibly be, within certain limits, valuable. But when the utmost possible elimination of hyposulphites is effected, there is another source of instability, for the entire removal of which no plan has yet been devised. It was discovered a few years ago by Mr. Spiller, of the Royal Arsenal, Woolwich — a veteran photographer, for veterans in this art are often still young men — that a compound was formed between the albumen on the surface of the paper, and the nitrate of silver, which was insoluble in the fixing bath, and remained in the white parts of the finished print, where no trace of silver should be present. This compound of silver is found inevitably to injure the purity of the whites when the picture is long exposed to the light; and to secure absolute permanency in silver prints it appears necessary to find, on the one hand, some other material than albumen to give a satisfactory surface, or on the other, some solvent which shall remove the traces of silver which combine with it. Notwithstanding, however, all the sources of danger to which an ordinary photograph is subject, it is found, when it receives due care throughout the stages of its production and future preservation from injury, that it possesses a very fair tenure of permanency, and although it may, from inevitable causes, lose some of its purity and brilliancy, it will never become entirely faded or destroyed from internal causes of decay. Some other fixing agents have, from time to time, been proposed, the sulphocyanides especially, but their advantages have not been sufficient on trial to bring them into general use.

Notwithstanding the comparative youth of photography, sun drawing having been once discovered as a possibility, numerous methods of effecting the same end have been proposed: processes have multiplied *ad infinitum*. Many of these are modifications of the original idea, others are distinctly new in principle. Of these a large number are interesting as scientific curiosities, but have never come into practical use. To Sir John Herschel the art is indebted for many valuable contributions,

which contain the germs of practical processes. Amongst interesting researches into the photographic properties of the juices of many flowers, and the salts of many metals, the printing processes with the salts of iron are most important. If paper be prepared with a solution of a persalt of iron and exposed to light, it loses oxygen, and a protosalt of iron is produced, which possesses the power of reducing the salts of other metals, which was not possessed by the persalt. Wherever light has acted, a power to reduce, solution of gold for instance, and so produce a picture, is the result. Of the variety of printing processes which arose out of this property of persalts of iron to pass into protosalts in the light, those in which an image in Prussian blue is produced by the action of some of the compounds of cyanogen, are perhaps the most valuable, although as yet they have been but little utilized.

Amongst the proposed printing processes which have been utilized commercially, is one based on re-actions somewhat similar to that to which we have referred; a salt of uranium being employed instead of a salt of iron. The use of uranium was proposed some years ago by Mr. Burnett, and, after a time, passed out of notice. Its use has recently been revived in a process introduced to the public as the "Wothlytype," a method for which especial merits of various kinds have been claimed. The results were, in many instances, very fine; but, on the score of permanency, little advantage appeared to have been gained.

One of the most promising methods of meeting the cause of fading to which we have referred, arising from the insoluble compound of silver and albumen in the ordinary prints, appears to be found in a process in which a compound, called collodion-chloride of silver, is employed. This method is the discovery of Mr. Wharton Simpson. The formation of the new sensitive compound is dependent on a curious, and before unsuspected, chemical fact, namely, that chloride of silver, formed by double decomposition in collodion, is held in suspension, instead of being precipitated, as is its wont, when formed in other solutions. The chief purpose to which this compound has been applied hitherto, is the production of very delicate and beautiful pictures on opal glass, ivory, and similar substances.

The reproach of instability does not appear destined to cling to photography much longer. A new mode of printing, in which the agents employed are the pigments fa-

miliar to the painter or the ordinary printer, has recently attained a high state of perfection. In 1839, M. Monge Ponton made the curious discovery that a solution of bichromate of potash applied to writing-paper became insoluble whenever it was exposed to light. Subsequent experimentalists discovered that this salt, when mixed with a large number of soluble organic bodies, such as gum, gelatine, starch, albumen, &c., had the property of rendering them insoluble after exposure to the action of light.* In 1855, M. Poitevin conceived the idea of utilizing this property in the production of unfading pictures, by what was termed a carbon process, finely powdered carbon being the material of which the shades of the pictures had to be formed. Numerous practical difficulties delayed the consummation desired, and a host of experimentalists gave attention to the subject, with more or less success. To Mr. J. W. Swan, of Newcastle-on-Tyne, the honour belongs of completely meeting all difficulties of principle and detail, and of producing a method which is practically successful, and yields perfect results. In this process the image may be produced in any pigment, the tint and permanency of which may render its use desirable. This pigment, in the finest state of subdivision, is mixed with gelatine, and applied to paper, which can be kept ready for use. To render it sensitive it is immersed in a saturated solution of bichromate of potash, and when dry is exposed under a negative. Unlike silver printing, the progress of colouration cannot be watched, as no indication of the action of light is visible; but the time necessary is measured by a simple actinometer. When the exposure is completed, it is found that wherever light has acted the gelatine is insoluble, whilst the parts protected from the action of light are still soluble in warm water, and can readily, together with the colouring matter, be washed away, the insoluble portions remaining, and imprisoning the colouring matter so as to form a picture. Gradation in depth from dark to light, is obtained by gradation in thickness of the semi-transparent layer of gelatine and pigment. To secure this gradation in thickness, the observance of a curious principle is necessary. The action of light is suffered to take place on one side of the film, and

* Some little uncertainty prevails as to the precise re-action which takes place. It appears probable, however, that the action of light on the bichromate produces a decomposition in which a chromate of chromic oxide is formed, which, being insoluble, prevents the solubility of the organic matter which is entangled therewith.

the washing away of unaltered and still soluble gelatine is effected at the other side. Through the most transparent parts of the negative, light passing most readily, penetrates most deeply into the layer of coloured gelatine; where its passage is retarded by the varying degrees of opacity in the negative, it penetrates the gelatine in a less degree. The film of gelatine and pigment of varying thickness on a white ground gives the effect of washes of water-colour of various depths, and produces the picture in gradations of pigment, resembling a drawing in sepia, or Indian ink. These photographs, besides possessing all the stability which can arise from the use of permanent pigments, possess a remarkable degree of beauty, not often attained in ordinary photographic prints.

The principle upon which this process is based, namely, the action of light in rendering insoluble a mixture of a salt of chromic acid with organic matter, has been applied in a variety of modes for producing photographic impressions besides that to which we have just referred, and there are photo-engraving, photo-lithography, photo-enamelling, and photo-relievo printing processes, all depending on the action of chromic salts. Very early in the history of the art we find that attempts were made to combine the operations of photography and the printing press. Niepce attempted to etch the image he obtained on metal plates. Fizeau succeeded to some extent in a similar operation with Daguerrotype plates. Various other attempts, with a similar aim, were made with greater or less success; but it was not until the year 1852 that any great success was obtained, when a process was patented by Mr. Fox Talbot, which possessed much promise, and which, in various modifications, has been used with advantage since. A plate of steel or copper was coated with a solution of gelatine or similar substance, to which was added bichromate of potash. This was exposed under a suitable photographic cliché to light, which rendered insoluble all the portions of gelatine upon which it acted, and these insoluble portions protected the metal in the subsequent operations in which an etching liquid was employed to bite the plate, and produced a printing surface. This method was only suitable, however, for the rendering of subjects in which there was none of the gradation technically known as half-tone, although for designs in which gradation was produced by the proximity or thickness of lines or points employed by engravers it answered well. In the attempts to repro-

duce on an engraved plate the effects of a photograph from nature, it has been found desirable to call in the aid of the principle involved in mezzotint or aquatint engraving, and secure a general grain on the plate, for the double purpose of rendering half-tone and giving the plate ink-holding capacity. Hitherto these attempts have not been attended with perfect success. About ten years ago, high hopes were excited by a method consisting of a modification of Talbot's plan, which was introduced by Herr Pretsch, and gave some very fine results. An influential association, styled the Photogalvanographic Company, was commenced with a view to work the process commercially, but after spending a good deal of capital the concern was closed, chiefly, we believe, from the difficulty of uniformly obtaining presentable results without considerable and costly aid from the hands of the engraver. Mr. Talbot has since made progress in a method announced as photoglyphic engraving; Mr. Duncan Dallas has issued very fine examples of what he terms photo-electric engraving; M. De la Blanchère has issued very good results engraved by a 'heliographic machine;' amongst others, M. Placet and Mr. J. W. Swan have worked successfully in the same direction; but although there is no reason to doubt that ultimate success will be achieved in the application of sun drawing to engraving purposes, the method of perfectly rendering a photograph from nature by the ordinary operations of the printing-press has yet to be introduced to the public.

The application of photography to the production of a printing surface on a lithographic stone has undergone a similar history, and with very similar success. After the trial of various inefficient methods, a perfectly successful process was introduced by Mr. J. W. Osborne, of the Government Survey Office, Victoria, and shortly afterwards, apparently independently, by Colonel James, of the Ordnance Survey Office, Southampton; the especial purpose of both gentlemen being the reproduction of official maps. The perfect accuracy and rapid facility with which facsimiles, or reductions on any scale can be multiplied by this method, give it immense economic importance, and it is now regularly employed in the Ordnance Survey Office, an annual saving of more than £30,000 being effected to the country by its use. Facsimile reproductions of portions of Domesday book, of the first folio edition of Shakespeare's works, of other rare works have been also issued by its aid. The mode of working now employ-

ed appears very simple. A sheet of paper is coated with a mixture of gelatine and bichromate of potash, and when dry exposed under a negative, by which an image in insoluble gelatine is obtained. The coated surface of the paper is now covered all over with transfer ink, and then floated on hot water, which rapidly softens and removes all the soluble gelatine and the ink attached to it, leaving the insoluble gelatine, forming the image, coated with ink on the paper. This image is next transferred to the lithographic stone, or zinc plate, which is then etched and worked in the usual way. For subjects in line or stipple this answers admirably; but all the difficulties which pertain to photo-engraving as to the rendering of half-tone belong also to photography. The same modes of meeting those difficulties by the use of a grain have been attempted, but hitherto without perfect success. The most promising effort has been made in a process by Messrs. Bullocks, of Leamington, who have issued some good examples, in which an aquatint grain is employed to break up the continuous tints of the photograph, and render it possible to print them by means of lithography.

In all the modes of multiplying a photographic image by mechanical printing, it will be seen that the aim has been to make photography conform to the recognised modes of using the printing-press. But within the last twelve months a method has come prominently before the public, which involves a distinctly new principle. This method was discovered independently by two gentlemen, Mr. J. W. Swan and Mr. W. B. Woodbury, its development being chiefly due to the latter gentleman. In the ordinary photograph, variations in tint are obtained by different depths of reduced silver, having varying depths of colouring power. In ordinary engravings gradation is obtained by large or small spaces covered with opaque ink. But in the new method, the varying depths of tint are produced by varying thickness of a translucent ink.

By the use of gelatine and bichromate of potash, an image in relief is obtained by the action of light. From this an intaglio in copper by electro deposition, or in soft metal by hydraulic pressure, is produced, and this intaglio forms the printing-plate. A transparent ink is formed by adding a permanent colouring matter to a warm solution of gelatine, and a small quantity of this ink being poured on the middle of the plate, and a sheet of paper placed upon it, the whole is subjected to pressure, by which the ink is forced into all the interstices of

the intaglio, and pressed away from the portions in relief. In a few seconds this gelatinous ink has set, and the paper, when lifted away, brings with it all the transparent ink from the intaglio, which forms a perfect transcript of the original photographic negative. The picture is really a cast in coloured gelatine, showing, however, but little relief. These pictures, resembling very fine photographs in permanent colours, can be produced, we understand, at the rate of a hundred and twenty in an hour, and will probably form a valuable aid to book illustration. After they are completed, they are submitted to the action of a solution of sulphate of alumina, which protects the gelatine from the action of moisture. How far the simple photographic presentment of any subject can compete with methods of engraving in which the intelligence and artistic skill of the human brain and hand are embodied, we do not here discuss; but the ingenuity of the method and excellence of the results challenge high approbation.

A mode of photographic printing, novel in some features, and which embodies something of the principle common in the application of dyes to textile fabrics, was last year introduced to the public by Mr. Willis, and may possibly find economic application. It consists in exposing paper prepared with gelatine and bichromate of potash, and exposing it under a cliché, which will protect the portions intended to form the shadows, and permit the action of light on the parts which will form the lights. On submitting this print to the fumes of aniline, the reaction between the chromic acid in the paper, where light has not acted, and the aniline, produces a black tint, whilst the portions upon which light has acted, having no effect on the aniline, remain white. In this method, an ordinary drawing or engraving of any kind serves as the cliché, and reproduces a facsimile of itself, without the necessity of obtaining a negative. In the reproduction of maps, plans, &c., its chief use will be found.

Another phase of photographic delineation in which the chromic salts play a part, has been brought to a high degree of perfection. It has been found possible to form the image, obtained from a negative, in ceramic colours, and by the action of heat to produce perfect enamel pictures. Experiments in this direction requiring especial skill and appliances for the management of ceramic operations, have been confined to a few individuals. M. Lafon de Camarzac has carried out the production of photo-

graphic enamel miniatures to the highest perfection, rivalling the finest ceramic paintings. His mode of working is made the matter of much secrecy, but there is little doubt that it is analogous to that of M. Joubert, whose chief attention has been devoted to the production of enamels on glass intended for decorative purposes, in which it may, for many purposes, with propriety replace painted glass. The mode of producing the ceramic image consists in coating a plate of glass with a mixture of a bicarbonate, albumen, and honey: this is then exposed under a suitable cliché, in which the parts intended to be white will be brought under the action of light. The result is, that these parts become hardened, whilst the protected parts retain the moist, sticky character belonging to such a mixture. Vitreous colours applied in a fine powder adhere to the moist portions, but not to those parts where light has acted. The picture thus produced in vitreous colours is ready for firing after the usual method employed in enamelling. It is possible to colour the enamel photograph so produced in enamel colours, and so produce a finished enamel miniature, combining the faithfulness of photography with the skill of the miniature painter.

In the majority of these modes of multiplying the images drawn by sunlight, it is probable that portraiture will ever be the most popular application. The possession of a similitude of that which it loves, admires, or honours, seems to be a passion almost amounting to a necessity of the human mind. The portrait seems to recreate the past, to restore the absent, and to give enduring being to things which pass away. Cowper's burst of fervid affection in addressing his mother's portrait aptly embodies the feeling of every one in gazing on the likeness of a departed friend. Goethe, when he speaks of the strange sweet way in which we seem to talk of an absent friend when we look upon his picture, tells a tale echoed in the lowliest cottage as well as in the palace. Photography could not fail then to be a popular art in supplying a want which the human heart has always felt. But the recent developments of this phase of the art have almost amounted to the creation of a new passion, or a new want. Photography in its ordinary phases had stimulated the demand for portraiture, and brought into existence a new class of portraitists, who were rapidly superseding the old-fashioned race of miniature painters of the Miss La Creevy school, whose pink and white faces with blue shadows, large eyes,

and small mouths, had no chance against the realistic but less pretty likeness produced by the camera. But although for many years photographic portraiture was in demand, it was not a rage. Little more than half a dozen years ago, a Parisian photographer conceived the idea of issuing a new style of picture, which he designated *cartes de visite*. The idea took, although the pictures were never employed for the purpose indicated by the name which distinguished them. But whilst no one was guilty of the vulgarity of leaving a portrait as a visiting card, everybody sat for a picture in the new style, and a system of portrait exchange and portrait collection was initiated, which has no precedent in pictorial art, and the statistics of which seem almost fabulous.

A variety of causes contributed to the popularity of this new phase of portraiture, besides its appeal to the latent love of pictures and persons. There was a completeness in the portrayal which had not before been usual: the man and his dress, or more important still, the woman and her dress, were depicted. The small proportions in which these were rendered, with a precision which secured complete identity, relieved them of much of the harshness which the uncompromising fidelity of the camera appeared to give to larger pictures, in which every freckle, scar, and wrinkle was rendered in black and white without the redeeming aid of colour. Albums for the reception of these pictures were provided, and these once obtained must be filled, first with family and friends, and then with popular favourites, and the photographic album containing the domestic portrait gallery, soon became a necessary adjunct of every drawing-room table. Royalty did not disdain to countenance and contribute to the popular fashion, and familiar portraits, not only of the reigning sovereign, but of every member of the royal family, down to the latest baby, became common in the home of every subject. At first these picture galleries indicated the predilections, tastes, and prejudices of the collector, and the especial bent of his hero-worship was apparent in the selection of the portraits. But soon the rage assumed a more catholic form, and universal iconolatry seemed to prevail. Cobden and Palmerston, Disraeli and Bright, Gladstone and Derby, Louis Napoleon and Garibaldi, Colenso and the Bishop of Oxford, Father Newman and Dr. Cumming, Archbishop Manning and Mr. Binney, may be found in the same album, without impeaching the orthodoxy in divinity, or indicating the bias in politics, of the collector. Neither

can any disrespect to the divine be argued if he is associated as near neighbour to a dramatist or popular singer, or the implied greatness of the statesman be called in question, if his *vis-à-vis* be the Chinese giant Chang, or General Tom Thumb. The publishers of this class of portraits could furnish some singular statistics of popularity, curious enough in their way. A popular singer or actor or a successful prize-fighter will sometimes have a run entering into tens of thousands of copies; but the demand will suddenly collapse, and their names will be heard no more. Public men, whose names are distinguished in connection with the pulpit, with literature, science, or art, or in the legislature, are in constant demand, notwithstanding that the especial rage of this collection of portraits has within the last twelve months considerably subsided. Royal portraiture is always popular, and perhaps nothing can more strikingly illustrate the loyalty of Englishmen than the constant demand for portraits of members of the reigning family. Just about the period of the marriage of the Prince of Wales, a photographer in Brussels had the good fortune to obtain sittings from the Queen and several members of the Royal Family, including the Prince of Wales and the Princess Alexandra, and the sale of these portraits exceeded two millions of copies. One photographer alone in this country has, during the last few years, issued upwards of half a million yearly of members of the Royal Family. After the Royal Family, popular statesmen are the greatest favourites: Lord Palmerston during his life and for some little time after his death being in greatest demand. If the sale of men's portraits afford any indication of the popularity of their principles, it is tolerably manifest that liberalism obtains very strongly in this country, the circulation of the portraits being in the ratio of ten of Gladstone to one of Derby, who is, however, judged by this standard, the most popular of the conservatives. On the other hand, the portraits of Louis Napoleon and Garibaldi have about an equal popularity, the rage for the portraits of the latter being more spasmodic, and of the former more steady. After statesmen, popular literary men and clergymen are most in demand; and after these, men of science and artists; and lastly, popular actors and singers. Bishops seem to circulate in virtue of their rank, the Archbishop of Canterbury having the most extended circulation, whilst clergymen and ministers are prized only in virtue of their popularity. Mr. Spurgeon was for a

time in very large circulation; Mr. Binney less extensively, but more constantly.

Of public portraits alone, it is certain that within the last few years the issue has amounted to several millions, the issue by one publishing firm having exceeded half a million a year, whilst the private portraits circulated in family and friendly circles only, have been distributed in still greater numbers. During some years whilst the card mania was at its height, it was not an uncommon thing for photographers who devoted themselves solely to private practice, without any view to publication, to issue ten thousand copies annually, making an aggregate of many millions of portraits issued in family circles only.

Other forms of photographic portraiture have recently shared with the *carte de visite* a portion of the popular favour. 'Diamond Cameos,' in which four small medallions, representing four different views of the face, punched into convexity to give a semblance of relief, have claimed attention. Cabinet portraits, which resemble the *carte* in form and details, but in larger dimensions, are rapidly gaining popularity. Amplified portraits, some of the size of life, produced from small negatives by the solar camera, an apparatus by which all the details of the small portrait are magnified without the optical inconveniences which would result from the attempt to take pictures of such large size direct, have of late years begun to attract public attention. On the phenomena of binocular vision, and its illustration by the stereoscope and photography; on the attempts to produce sculpture by the aid of a series of portraits taken all round the sitter, the outlines of which were subsequently traced by a pentagraph, one arm of which, by successive incisions, cut out the figure from a mass of modelling clay; and many other familiar and unfamiliar pictorial applications, we must refrain from extended comment.

The claim of photography to rank as a fine art has been, especially in relation to portraiture, hotly contested of late years. On the first discovery of such a method of delineation, its beauty received high recognition from the first authorities, and we find Paul Delaroche affirming its high art excellence; we further find, that the first President of the Photographic Society was also President of the Royal Academy. Later, it has become customary amongst many artists to decry photography as a soulless, mechanical method of delineation, and its results as vulgar and despicable. The fact that photography displaces and supersedes

a large number of those who have hitherto claimed the sole immunities attaching to the name of artist, renders it not unnatural that its claims should be regarded with jealous distrust; and the fact that its facile arms have been opened to many whose vile productions have tainted its reputation, has furnished a ready argument to those who would dispute its capability and position. In regard to portraiture, however, the case is tolerably clear. The painter is not a mere imitative machine: he endows his work with a certain character. The fact that Titian or Vandyke always made gentlemen of his sitters—that Kneller and Lely invested the most commonplace damsel with a meretricious charm—that Reynolds and Gainborough each lent his own specific grace to the portraits he painted, need not be disputed. It is said they painted a soul as well as a face; but it may be fairly doubted whether that soul was that of the sitter or the painter. If the artist simply reproduce the expression he sees, he does exactly what photography does. If he paint the expression which he conceives to be characteristic of his sitter, he paints a conception of his own, which, whatever it may add of force, beauty, or pictorial value, does not add to the literal truth of the resemblance. When Boswell asked of Johnson whether he preferred 'fine portraits or those of which the merit is resemblance,' he received the unhesitating response, 'That their chief excellence is in being like.' A doctrine has been long held, however, which, as commonly stated, cannot be fairly gainsaid, that a portrait should represent the sitter at his best. Jean Paul Richter has remarked that it should be such a perpetuation of the best self that it might induce the original, whenever he looked upon it, to avoid being more grovelling or base than his pictured resemblance. Mankind readily accept the doctrine, and by common consent it is regarded as a painter's duty to give dignity and grace to his portraits. A matter-of-fact portrait is almost an affront. When Humboldt, the diplomatist, who refused to sit to Isabey, afterwards saw his portrait in the picture of the Congress of Vienna, he exclaimed, 'I determined to pay nothing for my portrait, and the rogue of a painter has taken his revenge by making it like.' This notion of painting a man at his best and representing the inner life and character, and not merely a map of his face, is really more specious than strictly true; or, at least, such truth as it contains is often used to give currency to much that is fallacious. The inner life and character may

be suggested; the 'mind, the music breathing o'er the face,' may be embodied in a painting. But when this is attempted by altering in the slightest degree the features, a false and conventional—however pleasing—portrait must be the result. Many painters have certain tricks of their own whereby they conceive they add to the beauty of the countenance. Sir Thomas Lawrence, for instance, gives a special curve of the eyebrow to all his sitters; and society admires these prettinesses. But it is easy to bring the matter to a stern test: Is it not tolerably certain that we should prefer to see a good photograph of Shakspeare or Milton, of Luther, or John Knox, or Oliver Cromwell, than all the paintings in which the artist gave us *his* notion of the best self of his sitter? Of Cromwell we have, probably, one of the best of existing historical portraits: his stern injunction, 'Paint me as I am, warts and wrinkles as well,' checked, doubtless, the softening touches of the artist; and Samuel Cooper's head of Cromwell is a portrait to study.

The fact is that a good photograph has a truth of its own, rarely belonging to the highest efforts of the limner: and the term has become idiomatic in our language, that a truthful transcript of a thing is 'photographic' in its resemblance. A good photograph often possesses a subtlety of resemblance which brings out characteristics of race or mental capacity scarcely seen in the original, but which undoubtedly exist. Unexpected family likeness is at times suddenly revealed in the photograph in a startling degree. Nathaniel Hawthorne has illustrated this very skilfully in his romance of the 'House with the Seven Gables,' and expressed his conviction that 'there is a wonderful insight in heaven's broad and simple sunshine. While we give it credit for only depicting the merest surface, it actually brings out the secret character with a truth no painter would ever venture upon, even could he detect it.' The painter, it is true, possesses facilities not always within the reach of the photographer: his work extends over many hours or days, during which he may perchance get glimpses of a higher or better expression than that presented to the camera in the few seconds in which its work is accomplished, an accident in no wise to be debited against photography, as it would have rendered that expression if it had been presented to it. That photography is responsible for some sad travesties of the human face divine is an argument of little weight. We do not estimate the character of the apostles by that of Judas Iscariot.

Out of the domain of portraiture, the art claims of photography have been less disputed. Bedford's photographs of the ruins of Baalbec, of the Mount of Olives, the Garden of Gethsemane or the Lake of Gennesareth, and a hundred other scenes in the East, are subjects in which we require the most literal imitative art, and of which we should resent the production of fancy pictures, or even renderings in which the subjectivity of the painter obtruded itself. In the Swiss views of Mr. W. England, and the English lakes of Mr. Mudd, we prize the admirable rendering of charming scenes in nature the more because they are also truthful. The wondrously beautiful instantaneous pictures of Mr. Valentine Blanchard or Mr. Breese, in which the varying phases of flying cloud and breaking wave, of sunrise and sunset, transient glories which the jaws of darkness swallow before a man can say, 'Behold!' are prized because they snatch a grace beyond the reach of art. In all cases where pure imitative art without imagination is required, it is scarcely questioned that the sun is the best limner, 'nature's sternest painter, yet the best.'

The photographer's materials are doubtless less plastic than those of the painter, and less capable of expressing the artist's conception. Yet even in this respect photography is not so mechanical as might seem at first glance necessary to such a mode of delineation. The photographer can stamp the impress of his mind upon his work, and in proportion to his artistic culture will be the beauty of his work. Even in portraiture the 'manner' of the photographer is as distinctly seen as in the work of the painter, and the connoisseur in this branch of art, in looking over a series of portraits, will distinguish with perfect certainty a Claudet, a Williams, a Mayall, a Robinson, or a Silvy. It is not merely in the distinctive arrangement and accessory, in the management of pose and lighting, or in the attention to expression which is apparent; but in the pictorial feeling of the whole that this manner is manifest. The control over the light and shade, and the force on the one hand or the delicacy on the other, depending much on the judgment exercised in the exposure and in the chemical process of development, all exercise an important influence on the art-value of the result, and effectually preclude the notion that in photography pictures are produced by a mechanical process similar to that in which a tune is ground out of a barrel-organ. Without falsifying, photography can ameliorate

if it be in the hands of an artist, whilst it may easily caricature when it is in the hands of one ignorant of art. The latter like Procrustes fits every sitter to his limited appliances regardless of the result.

It cannot be denied that photography has many pictorial offences to answer for, and if its art-claims were to be judged by the productions of eight-tenths of the self-styled 'photographic artists' who multiply travesties of humanity, they would assuredly be found wanting. Every form of awkwardness in position, every style of incongruity in accessory and entourage has been exhausted, every canon of art studiously outraged. Even the special claim of photography to accuracy has been ingeniously destroyed by mismanagement of light and shadow upon which form depends, by the use of bad lens, and worse manipulation, and by the exaggeration of the tendency in photography to mistranslate colour. These and other enormities are set down against photography; but in spite of these, we apprehend that an art with such capabilities will maintain a high distinctive position of its own, however grudgingly its position in the sisterhood of the arts may be ceded to it.

The inexorable conditions which bound the photographer's powers to the production of that which his lens can see and nothing more, closes to him in the strictest sense the domain of imaginative or ideal art. But difficult as the task may seem to give embodiment to a conception of the artist's brain by the aid of photography, it has been attempted with an amount of success which may be fairly said to establish the legitimacy of the effort. Some years ago Mr. Lake Price, a painter of good position, produced some of the earliest photographs of this kind, which excited considerable attention. More recently, Mr. Rejlander, a Swedish painter, who had devoted himself to photography, took a still more ambitious step, and with wonderful skill made some attempts to produce ideal subjects. By a method technically styled double printing, the various components of the picture, produced on separate negatives, were printed in succession on the paper, and by skillful arrangement and combination made to form one harmonious whole. He has more recently devoted himself to the production of *genre* pictures by the aid of photography, many of which tell a story, or express a sentiment, with more force, truth, and beauty than half of the similar attempts made with pencil and canvas. Boldest and most successful, however, of those who have made photog-

raphy subservient to their conceptions of pictorial art is Mr. H. P. Robinson, a gentleman who has attained a high position as a portraitist. His success in what may be termed the purely pictorial applications of photography has been most unequivocal, and has been due not less to his judicious choice of subjects suited to the powers of the art he employed, than to the culture and skill he has brought to bear on its application. Eschewing imaginative art as the legitimate ground of the painter, he has devoted himself to a field in which photography may be applied without challenge, the rendering of characteristic scenes of English domestic and rural life, in which he has achieved very high success, and has illustrated very nobly the capacity of this method of delineation for realizing, within certain limits, the conceptions of the artist, and the photographer's power to select, arrange, and compose from various materials a perfect pictorial whole. If Zeuxis of Heraclea were permitted to employ five models from which to select the beautiful parts in each to complete the picture of one beautiful woman, surely the photographer may have the privilege of the painter and produce his picture piecemeal, if he can justify his claim by presenting a successful result.

The absence of colour will always necessarily limit the scope of photography in art, for although photography in natural colours has already been proved possible, there is not much probability of the discovery becoming of practical use. Nevertheless photography will always have a position of its own, which will be little influenced by the status awarded to it in art. One of its most serious early disabilities as a hand-maiden of art, the false rendering of colour into light and shade, is fast being overcome. That blue is a highly actinic colour, and yellow and red non-actinic, remain facts. That blue eyes are apt to be rendered too pale, that golden tresses are apt to appear in the photograph black, still remains in tendency; but the improvements in appliances, and the increase of skill in meeting difficulty by expedient, have contributed much to neutralize these disadvantages, and enabled the skillful photographer to approximate to a correct scale in his mono-chromatic rendering of objects in colour. This capability has been found of essential value in the reproduction of paintings, an application of photography of essential value to art and artists, as the photograph presents not a translation in which the special manner of the author is lost, but a transcript of the original, in which every characteristic

of handling and treatment is retained. This is a branch of photography which has received rapid development of late, and, by its rapidity and cheapness as well as its fidelity, is materially tending to supersede engraving.

The credit which has been denied to photography on the score of art capacity must, however, be conceded to its literal fidelity in rendering facts. That it is not imaginative, that it cannot modify or omit details from its presentments, becomes, in many cases, its cardinal virtue. If it nothing extenuate, it sets down naught in malice, and when it enters the witness-box its evidence leaves little room for doubt. Hence it has taken an important place as an auxiliary to the administration of justice, both in civil and criminal cases. In multiplying indisputable facsimiles of important documents, in indicating pictorially the relative positions of disputed territory, its use is obvious. But it is in its aid to the discovery of identity in persons charged with crime that its legal use is most important. Nearly twelve years ago Mr. J. A. Gardiner, governor of Bristol gaol, addressed a letter to the governors of Her Majesty's gaols generally, pointing out the importance of preserving a photographic record of the prisoners under their charge — a veritable rogue's gallery! which might be a rare study to the disciples of Lavater. It was not with a view to the study and classification of physiognomical types that Mr. Gardiner proposed to secure sun drawings of his enforced guests, but solely with a view to their identification when they visited gaol a second time. 'It is well known to all,' he said, 'who have been concerned in criminal administration, that the most cunning, the most skilled, and the most daring offenders, are migratory in their habits; that they do not locate themselves in any particular town or district, but extend their ravages to wherever there is the most open field for crime;' the best planned robberies, he adds, being rarely conducted by the resident thieves in any district. This migratory, or Bohemian tendency, diminished the risk of identification in the exact ratio in which it brought the criminals within fresh judicial districts and under fresh official inspection, and often permitted expert professional thieves, hardened criminals, to pass off lightly as first offenders, only just stepping out of the path of rectitude. Written descriptions were rarely found sufficiently precise for identification, and hence Mr. Gardiner was induced to try photography, which he found most efficient for the purpose, and strongly

recommended for systematic adoption to his brother governors. The success which attended the partial adoption of this plan induced a Select Committee of the House of Lords, on whose Report the Prison Act of 1865 was framed, to recommend its universal adoption in Her Majesty's prisons.* For some unexplained reason the Secretary of State did not see fit to adopt the recommendation, and photography is only employed where the governors of gaols themselves see its importance.

Where the system is adopted, the portrait of every criminal is taken as soon as he arrives at the gaol, and prints from this negative are circulated, attached to a printed form, in which a description is given, including details of age, height, complexion, hair, eyes, nose, whiskers, and specific marks, and also the account which the prisoner

gives of his place of birth, last residence, education, trade, religion, &c. The circular, containing the portraits and these particulars, is forwarded by the governor to the governor of a neighbouring gaol, stating that 'the prisoner above described is in custody for trial;' and a request is added that if he is recognised as having been in custody before, particulars may be forwarded, and also that the circular may be forwarded to the gaol marked in the route annexed. Thus the document passes through a prescribed route, receiving as it travels the testimony of various governors, intimating that the prisoner is 'not known,' or that he was convicted at any former period, generally under some other name than that now assumed, and is finally returned to the gaol from whence it was issued, furnishing at times curious facts in the statistics of crime, and in the biography of gaol-birds.

As may readily be conceived, the prison linner is not often favoured with willing sitters, and strange are the devices by which the cunning of the criminal is manifested in evading this unerring mode of personal identification, which he regards as taking a mean advantage of him. Some treat the attempt with open defiance, resolutely refusing to sit still during the operation; others, with a mock air of submission, sit perfectly quiet during the preliminary arrangements and focusing operation, but move sufficiently at the vital moment of exposure; others, who pretend to have no objection to be portrayed, contrive to produce such an amount of facial contortion, by squinting, twisting the mouth, &c., as will effectually destroy identity in the portrait. In some cases this cunning is met with resolute perseverance, and in others with stratagem, so that in all cases a sufficiently characteristic likeness is obtained. One governor informs us that he generally contrives that the operation shall take place just before dinner, and refractory sitters are informed that no dinner will be dispensed until the portrait has been obtained, a practical argument, the force of which is generally recognised. In another gaol, after the sinner has, by movement or contortion, baffled the portraitist, he, or still more commonly she, is handed to a seat in a well-lighted place to rest awhile and watch the operation repeated with the next criminal. The sinner just rejoicing in the cunning which has defeated the attempt of the photographer, generally sits perfectly still, watching with eager interest the operation for which another is sitting. In the meantime, a concealed camera, within range of

* 'Although the proof of former convictions is not one which is directly involved in the question of prison discipline, the attention of the committee has so frequently, during the course of examination, been drawn to the great public inconvenience which is felt from the difficulty in identifying a previously convicted prisoner, that they cannot close their report without indicating both the extent of the evil and the suggestion of a remedy. The committee are satisfied that it is of the greatest importance that those offenders who are commencing a course of crime should be made aware that each repetition of it, duly recorded and proved, will involve a material increase of punishment, pain, and inconvenience to them.

'Sir W. Crofton states with great clearness, the prejudicial effect which the difficulty of identifying previously convicted prisoners has had in Ireland, and he has indicated photography as a simple means by which it has been in a great measure obviated.

'The governors of Bristol, Wakefield, and Leeds gaols, corroborate the advantage of the use of photography. Mr. Gardiner says, "I introduced some years ago, indeed I was the first who introduced them, the Daguerrotype portraits of the prisoners, and, from having succeeded in one or two cases, we introduced it more freely; we now take a large number of portraits, and I think it would be very difficult for a man to escape detection in our gaol. I take a stereoscopic picture instead of a plain portrait, and I request the parties to whom I send it to put it into the stereoscope. They have a better opportunity of seeing the man before them standing out in relief. We merely take portraits of those whom we do not know,—railway thieves, and strangers to the city, who are taken up for picking pockets at the railway stations and in railway carriages. We have found out a great many by that means. On one occasion I recollect an officer of mine being offered a large sum of money by the wife of a prisoner to release him. He was offered £100. This was reported to me; and I thought, as the man had only three months more to serve, he certainly must be wanting somewhere else. I took his portrait directly, and sent it round to perhaps 40 or 50 different gaols, and he was recognised at last at Dover. I had an order from the Secretary of State to remove him instead of discharging him. I removed him on a Friday, and on the following Friday he was sentenced to fifteen years' transportation for highway robbery," and the committee strongly recommend the further extension of this system, which is inexpensive, effective, and wholly free from objection.'—*Report of Select Committee on Prison Discipline.*

which the first victim had been placed, is doing its work, and a natural and characteristic likeness is obtained of the unconscious criminal, who had apparently retired, master of the situation. A strange and sad gallery of portraits, not quite denuded of individuality by close cropped hair and prison gray garb; the portraits being often secured in the guise in which the culprit comes into the hands of justice. A series forwarded to the writer, by the excellent governor of Carlisle gaol, himself an accomplished photographer, might furnish a mournful theme for the moralist. Not all brutalized, or besotted, or sinister; not all with the forehead villanous low, the square jaw, the coarse mouth, or the eye of wild beast; but in more cases a weak and weary, or a craven and humbled look. Some of the faces remind us painfully of another series of portraits, taken by Dr. Hugh Diamond, of insane persons, and suggest to us the connection between diseased morals and diseased minds, between crime and insanity. Physiognomy, to the careful observer, may often, doubtless, indicate tendencies of character, and suggest phases of mental history. None of the portraits before us look intellectual, or suggest culture: they are mostly of a low type; but there is nothing to suggest the dogged, resisting, vindictive beings, with overhanging felon-brow and sunken cruel eyes, which sensation writers at times attribute to the criminal classes. They are rather examples of God's image degraded and enfeebled by neglect; plants which resemble weeds, because left without culture. The only portrait marked as that of a murderer is that of a weak but not imbecile-looking old man, the mildest in expression amongst a score of criminals.

Photography, as the auxiliary of the detective in tracking the criminal flying from justice, renders most important service.* The photograph of Müller, the murderer of Mr. Briggs, became practically his death-warrant. It supplied the jeweller, who bought the plundered chain, with a means of identifying the foreign-looking person who sold it, and rendered the officer of justice, who had never seen him, familiar with his features, so that he detected him amongst the crowd of passengers on the deck of the Victoria when, on a fine summer day, it entered the bay of New York, to give, in a

few hours, the murderer liberty in a new world. The 'card' of the absconding fraudulent debtor or embezzling clerk is placed in the hands of Inspector Bucket, and he starts off without hesitation to Australia or America to apprehend a man he has never seen. The universality of photographic portraiture has been singularly useful in this respect. There are few men, open in any degree to the sympathies of their kind, who have not at some time sat for a photograph, little dreaming of the weapon it placed in the hands of their pursuers should they at any time step into the paths of crime. The powers of this silent witness have, however, led to singular exaggeration, and the lovers of the marvellous have been treated from time to time with records of the detection of murderers by the image remaining on the dead eye of the victim, which, duly magnified and photographed, has borne swift witness against the criminal. It is needless to say that this is an absurd impossibility. The retina of the eye retains the impression of an object so long as that object is before it, as does a mirror, and no longer. It has never been alleged, indeed, that the dead eye retained impressions, except in the case of murdered persons; the common belief in the Nemesis which attends the man-slayer having apparently generated this superstition in the domain of science.

Amongst the scientific applications of this art we find its noblest and most important uses. As an unerring means of making permanent register of transient effects, and recording facts in exact science, it has taken a high position, and as presenting a means of preserving the absolute autograph of nature it has already been the agent of valuable discovery. Sun, moon, and stars have impressed their own portraits on photographic tablets; magnetism by its aid records its own daily history; and the barometer records its own variations by photographic impressions. When announcing Daguerre's discovery, Arago, with prescient view, said it gave hopes of executing, in a few minutes, charts of the moon, then one of the most tedious and most delicate operations in astronomy. Since then his predictions have been more than verified. From the first a host of experimentalists have devoted themselves to the photography of the celestial bodies. Dr. Draper, Mr. Bond, and Mr. Rutherford in America; Father Secchi in Italy; Bertch, Arnauld, and Foucault in France; Crookes, Huggins, Fry, Brothers, with a host of others, and above all, De la Rue, in this country, are all asso-

* We understand that the London Stereoscopic and Photographic Company, one of the largest productive houses in every branch of Photography, frequently receive from Scotland Yard instructions to produce as many as 2,000 copies of the portrait of an important criminal at large and wanted by the police.

ciated with its rapid progress. Photography has not only enabled the astronomer to obtain ready and accurate record of all the eye could see, but it has recorded facts in connection with the physical history of the sun which the eye could not see, the photographic tablet being sensible to rays which made no effect on the organs of vision. In the year 1854 Sir John Herschel recommended that daily records should be made by photography of the sun's surface, at different stations, for comparison, and in accordance with this suggestion a photo-heliograph was established at Kew under the direction of Warren De la Rue, and others have since been established in different parts of the world. The importance of this constant and exact observation of the sun-spots becomes striking when it is remembered that a singular coincidence has been noted between the periodicity of their maximum recurrence and the maximum magnetic disturbance of our own globe. More than half a century ago Sir William Herschel, in a remarkable paper on the subject, pointed out a connection between the number of spots on the sun's disc and the abundance of the harvest. Without speculating on the fact that stars of the first magnitude, suns of other systems, have disappeared from record, and the possible darkening of our sun, the ascertained connection between magnetic storms and the increase in these spots is matter enough for grave consideration and careful observation. For this observation photography presents the only accurate and available facilities, and the results have been carefully tabulated by Mr. Warren De la Rue. Other most important photographic researches into the physical aspects of the sun have been made by the same gentleman. On the occasion of the complete solar eclipse in 1860, an expedition of astronomers under his direction visited Rivabellosa in Spain to obtain the most favourable point of observation. During the eclipse upwards of forty photographs were taken, in which the corona and the luminous prominences, or red flames, were finely rendered. In regard to the latter — observed on two former occasions, but the nature of which and whether they belonged to the sun or moon was unknown — it was ascertained that they really belonged to the sun and were not optical illusions, and one prominence was moreover shown in the photographs not visible in the optical examinations of the phenomena. Astronomers in Italy, France, and America, also obtained photographs of this eclipse, which

confirmed the observations made in Spain. Since then Mr. Warren De la Rue has obtained photographs of the sun, showing traces of Mr. Nasmyth's 'willow leaves,' and has further ascertained, by the aid of stereoscopic pictures, that the facule are elevations in the sun's photosphere. The photographs of the surface of the moon have suggested facts in its physical history of much interest. Taking advantage of the phenomena of libration, the moon having a libratory motion through an arc of 21° , it has been possible to secure stereoscopic images of the moon, indicating its conformation with an accuracy before unattainable. Portions before regarded as seas, it is now suggested, may be covered with vegetation, and it is deemed probable that it possesses a dense atmosphere. Photographs of the stars and planets, of Jupiter with his belts and satellites, have also been obtained. Minute as are many of these photographs, they admit of a sufficient degree of amplification to prove of the highest interest. In the case of the most recent and perfect lunar photograph by Mr. Ruthenford, of New York, from an original negative under two inches in diameter, enlarged prints of twenty-one inches diameter are obtained, possessed of a sharpness and perfection of definition in every way satisfactory.

Another application of photography, cognate to this, is its employment at Greenwich for recording the magnetic and meteorological variations, under the superintendence of Mr. Glaisher. When the importance of preserving a strict record of the magnetic perturbations occurred to the Astronomer Royal, and thirty years ago a magnetic observatory was attached to the establishment at Greenwich, it was placed in the charge of qualified attendants, who made their observations every two hours, night and day; and even this frequency was often found insufficient for a satisfactory record during magnetic storms. Photography has now superseded this wearisome and monotonous duty, and performs the office better, since it preserves a continuous, in place of an intermittent, register. Powerful as the magnetic force would seem, it is utterly impossible to secure self-registration of its vibrations by any mechanical means, the interposition of a cobweb being sufficient to derange the natural movements of the suspended magnetic bar. In effecting the photographic registration, a small concave mirror is attached to the apparatus suspending the magnet, the mirror of course moving with every movement of the mag-

net. This concave mirror reflects the flame of a jet of naphthalized gas, converging to a point at a distance of about 12 feet, where it falls upon a plano-convex cylindrical lens, which brings it to a sharp focus. Immediately in the focus of this lens is a cylinder of sensitive photographic paper, which steadily revolves, completing its revolution in twenty-four hours. With every movement of the magnet, the mirror effects a movement in the reflected light, and every movement of the light is duly registered in a latent image on the photographic paper, which only requires to be developed to give an autograph of the magnet and the record of its every perturbation. The biometrical variations are recorded by an analogous contrivance.

In microscopic science, photography has not been more niggard of its aid, and perfect pictures, amplified several thousand diameters, of the most difficult test objects, such as the *Pleurosigma Angulatum*, with every marking most sharply rendered, have been obtained. In surveying, topography, and physical geography, photography furnishes the most accurate data. In geology its records of the anatomy of the earth surpass in accuracy and interest the finest hand-drawing. In medical and surgical science its records of malformations or morbid conditions are necessarily of more value than records which might be characterized by the imperfect observation of the recorder. The same is true, indeed, of a score of other applications, such as the presentment of ethnological types, the transcript of ancient manuscripts, or of hieroglyphics from Thebes or Philæ, or the contents of a Saxon barrow. Everything, in short, where a minute record untinged by the prepossession or the incapacity of the recorder is of importance to the advancement of science, may receive the aid of this unerring and willing adjutor.

Amongst the many singular uses as a recorder to which photography has been put, its employment by Professor Piazza Smyth in delineating an interior into which for thousands of years the light of day had never penetrated, is one of the most interesting. Professor Smyth had a theory, which had been before promulgated, that we had an inheritance in the Great Pyramid. The wisdom of the Egyptians was supposed to have intended something more than a large tomb by these eternal monuments. Professor Smyth believed that the granite coffer was a primeval measure of capacity enshrined beyond the destructive action of cold, or heat, or moisture, or time; and by means of photography he re-

solved to bring the hidden and forgotten secret to light. A recently discovered form of portable sunlight, magnesium wire, which burns like a taper with a flame unrivalled in actinic rays, furnished him with the means. With a firman from the Pasha, a photographic equipment, magnesium wire, and a well-seasoned measuring-rod to place in contact with the objects to be photographed, the Professor proceeded to his task, and vindicated the position he had upheld. The photograph of the granite coffer, with the system of measuring-rods attached, furnished data for the calculation which proves that the vessel was a measure of capacity, from which the English quarter had been originally derived, and that the Egyptian coffer just measured with mathematical accuracy, four times the amount of our hereditary standard wheat-measure.

Photography, besides aiding and developing science generally, is perpetually revealing new wonders pertaining to itself, and especially in advancing the twin sciences to which it owes its existence — chemistry and optics. The latter has received very essential development from the new art. The earliest lenses employed in photography were of the least efficient description, slow in action, and without coincidence in the chemical and visual foci. Steadily, but slowly, improvement has been achieved. Opticians for a long time seemed to be under the conviction that the most perfect lens was that which accurately united the rays of different refrangibility reflected from one plane, persistently regarding the lens as an instrument in which their sole duty was to triumph over optical difficulties in securing perfect freedom from chromatic and spherical aberrations. To Mr. J. H. Dallmeyer photographers are indebted for the most complete recognition of the fact that the requirement of the photographer is an instrument to produce pictures of objects distributed over various planes, and unite the rays proceeding from these planes with sufficiently good definition on a flat surface. Instead of the old form of lens which curved the marginal lines, he also supplied them with instruments having perfect immunity from distortion, and in place of lenses subtending an angle of little more than 30 degrees, he has placed within their power the means of defining as much as 100 degrees on a flat surface. Other opticians have followed in his footsteps, and the optical facilities of the photographer are apparently steadily on the increase.

The reproduction of the colours of nature by means of photography at one time seem-

ed a dream beyond the range of possibility; nevertheless it has been actually accomplished, although perhaps with little hope of practical application. In the early labours of Sir John Herschel, promise was attained of this result as a possibility. Later, M. Becquerel and M. Niepee de St. Victor, the latter gentleman especially, have been successful in reproducing with much vividity the colours of nature; but no means have been found of fixing them. Both these gentlemen have worked on metal plates prepared with a sub-chloride of silver. Still later, M. Poitevin, in France, has produced natural colours on violet sub-chloride of silver applied to paper, and Mr. Wharton Simpson in this country has also secured natural colours on sub-chloride of silver in collodion applied to opal glass. The most singular feature in these operations is, that, whilst the action of light on salts of silver generally is to darken them, in the use of violet sub-chloride the light passing through clear white glass produces a bleaching effect, at the same time that, passing through coloured glass, it reproduces the colours in their true relations. Apart from the impossibility of fixing these pictures there are many other difficulties in the way which prevent the hope of a practical application of any of the methods hitherto discovered, and leave them simply as illustrations of a wonderful possibility.

The advent of a new art or the discovery of a new science has rarely induced any immediate and specific change in the habits of society. The introduction of printing was gradual, and beyond the slow but increased spread of education, it for some time induced little change amongst mankind. The discovery of the electric telegraph astonished the public, and introduced a new facility of communication; but with the exception of those engaged in the actual working, the people at large did not concern themselves much about its details. With the introduction of photography the case has been far different. Men of all tastes, habits, and stations seemed smitten as with a mania, but which, unlike older manias, such as the Dutch tulip rage, did not die out in a short time, but has rather gone on increasing. Never was a taste so catholic as that which has united in the bonds of brotherhood the disciples of this new iconolatry. Several priests of the Church of Rome have been amongst the most active contributors to the progress of the new art-science. An archbishop of the English Church is one of its zealous devotees. Clergymen of the English Church,

and ministers of dissenting congregations, are numerous amongst its adherents. The army, from the general to the private, furnishes recruits. Doctors, lawyers, and scientific and literary men are prominent in its pursuit. The senior wrangler of last year is an accomplished photographer. Every trade, no matter how lowly, every profession, no matter how engrossing, is compelled to afford some leisure to the earnest amateur in photography. Even royalty has not disdained to yield to the fascinations which surround the camera, and dark rooms are found attached to more than one royal palace. Societies have started into existence to discuss the processes, and aid each other in the practice of the new art. The Photographic Society of London, with the sovereign of the realm for its patron, the ex-Lord Chief Baron of the Exchequer for its president, and noblemen, artists, and men of science for its council, has a roll of nearly four hundred members, including every grade in society. A dozen other local societies with similar aim are scattered throughout the country. Similar associations are spread over continental Europe and America, and in all these the professional photographer and the amateur, the artist whose aim is to produce pictures, and the devotee of science, whose only object is to penetrate the arcana of nature, vie with each other in the ardour with which they pursue the several branches which photography opens to them. The wealthy amateur, to whom an hour's exertion was scarcely before known, will toil in the burning sun up mountain steeps, in close tents, or improvised dark rooms, with an energy and an ardour unknown to him who lives by the sweat of his brow. Failure and disaster, capricious silver baths, tormenting collodion, irritating chemicals of every kind, only stimulate him to renewed exertion; and his devotion to his art-mistress often seems increased in proportion as she tantalises him, now with the hope of success, and then with the despair of blank failure. The whole social history of the art is an enigma without a parallel.

Besides its influence on the literature as well as the social life of the day, photography has a literature of its own, which is perhaps *sui generis* in its history and character. In this country there are two weekly magazines devoted to the art—one issued in the metropolis, and another representing provincial interests. There are also a monthly and a fortnightly serial, besides certain annuals. America issues three photographic periodicals; France two, solely devoted to

the art, and others more or less interested in it. India, Italy, Spain, Prussia, Austria, Holland, Russia, each has its specific photographic serial. Many of these are conducted by men of high rank in science and letters; they are distinguished by a technology of their own, created by the growth of the art-science, to the interests of which, in its theoretical, practical, artistic, and social aspects, they are devoted.

The rapid growth of new and special industries is a fact so characteristic of the present day, that the statistics of photography can scarcely be regarded as wonderful, viewed merely as a question of economics. Nevertheless, some of the facts are sufficiently startling. Twenty years ago one person claimed the sole right to practise photography professionally in this country. According to the census of 1861, the number of persons who entered their names as photographers was 2,534. There is reason, however, to believe that these figures fall short of the real number; since then it is probable the number has been doubled or trebled, and that including those collaterally associated with the art it is even four or five times that number. But these figures fall far short of the number interested in photography as amateurs. We are informed that eight years ago, in establishing a periodical which has since become the leading photographic journal, a large publishing firm sent out 25,000 circulars—not sown broadcast, but specially addressed to persons known to be interested in the new art-science. The number of professional photographers in the United States is said to be over 15,000, and a proportionate number may with propriety be estimated as spread over continental Europe and other parts of the civilized globe. But a more curious estimate of the ramifications of this industry may be formed by a glance at the consumption of some of the materials employed. A single firm in London consumes, on an average, the whites of 2,000 eggs daily in the manufacture of albumenized paper for photographic printing, amounting to 600,000 annually. As it may be fairly assumed that this is but a tenth of the total amount consumed in this country, we obtain an average of six millions of inchoate fowls sacrificed annually in this new worship of the sun in the United Kingdom alone! When to this is added the far larger consumption of Europe and America, which we do not attempt to put in figures, the imagi-

nation is startled by the enormous total inevitably presented for its realization. In the absence of exact data, we hesitate to estimate the consumption of the precious metals, the mountains of silver and monuments of gold, which follow as matters of necessity. A calculation based on facts enables us to state, however, that for every twenty thousand eggs employed, nearly one hundred weight of nitrate of silver is consumed. We arrive thus at an estimate of 300 hundred weight of nitrate of silver annually used in this country alone in the production of photographs. To descend to individual facts more easily grasped, we learn that the consumption of materials in the photographs of the International Exhibition of 1862, produced by Mr. England for the London Stereoscopic Company, amounted to 2,400 ounces of nitrate of silver, nearly 54 ounces of terchloride of gold, 200 gallons of albumen, amounting to the whites of 32,000 eggs, and 70 reams of paper; the issue of pictures approaching to nearly a million, the number of stereoscopic prints amounting to nearly 800,000 copies. We have already glanced at the statistics of the card portraiture of public men. Some estimate may easily be formed of the industries stimulated or created by the circulation of these and other photographs in cases, frames, fittings, and apparatus of various kinds. One house alone, and by no means the largest among manufacturers, has issued little short of a million of albums for the card pictures. Stereoscopic pictures have had a circulation only less than that of the portrait cards, and these as certainly involve stereoscopes as cards involve albums. Accurate figures as to the exact extent of the various branches of manufacture, arising solely out of photography, cannot, of course, be obtained; but the facts already named are sufficiently suggestive.

Our review of photography as art, science, and commerce, has already extended beyond the limits we had prescribed for it, notwithstanding that we have only stated the leading facts of its history and applications with the utmost brevity compatible with completeness. Whether its future progress will bear any relation to that which has characterized the first quarter of a century of its existence we do not conjecture; but it is clear that this youngest born of the arts is destined to play an important part in the progress of that civilization which will prevail in the fulness of time.

PART VI. — CHAPTER XIII.

For two days after this Nina heard nothing from the Jews' quarter, and in her terrible distress her heart almost became softened towards the man who had so deeply offended her. She began to tell herself, in the weariness of her sorrow, that men were different from women, and, of their nature, more suspicious; that no woman had a right to expect every virtue in her lover, and that no woman had less of such right than she herself, who had so little to give in return for all that Anton proposed to bestow upon her. She began to think that she could forgive him, even for his suspicion, if he would only come to be forgiven. But he came not, and it was only too plain to her that she could not be the first to go to him after what had passed between them.

And then there fell another crushing sorrow upon her. Her father was ill, — so ill that he was like to die. The doctor came to him, — some son of Galen who had known the merchant in his prosperity, — and, with kind assurances, told Nina that her father, though he could pay nothing, should have whatever assistance medical attention could give him; but he said, at the same time, that medical attention could give no aid that would be of permanent service. The light had burned down in the socket, and must go out. The doctor took Nina by the hand, and put his own hand upon her soft tresses, and spoke kind words to console her. And then he said that the sick man ought to take a few glasses of wine every day; and as he was going away, turned back again, and promised to send the wine from his own house. Nina thanked him, and plucked up something of her old spirit during his presence, and spoke to him as though she had no other care than that of her father's health; but as soon as the doctor was gone she thought again of her Jew lover. That her father should die was a great grief. But when she should be alone in the old house, with the corpse lying on the bed, would Anton Trendellsohn come to her then?

He did not come to her now, though he knew of her father's illness. She sent Souchev to the Jews' quarter to tell the sad news, — not to him, but to old Trendellsohn. "For the sake of the property it is right that he should know," Nina said to herself, excusing to herself on this plea her weakness in sending any message to the house of Anton Trendellsohn till he should have come and asked her pardon. But even after this he came not. She listened to every footstep that entered the courtyard. She could not keep herself from going to the window, and from looking into the square. Surely now, in her deep sorrow, in her solitude, he would come to her. He would come and say one word, — that he did trust her, that he would trust her! But no; he came not at all; and the hours of the day and the night followed slowly and surely upon each other, as she sat by her father's bed watching the last quiver of the light in the socket.

But though Trendellsohn did not come him-

self, there came to her a messenger from the Jew's house, — a messenger from the Jew's house, but not a messenger from Anton Trendellsohn. "Here is a girl from the — Jew," said Souchev, whispering into her ear as she sat at her father's bedside; — "one of themselves. Shall I tell her to go away, because he is so ill?" And Souchev pointed to his master's head on the pillow. "She has got a basket, but she can leave that."

Nina, however, was by no means inclined to send the Jewess away, rightly guessing that the stranger was her friend Ruth. "Stop here, Souchev, and I will go to her," Nina said. "Do not leave him till I return. I will not be long." She would not have let a dog go without a word that had come from Anton's house or from Anton's presence. Perhaps he had written to her. If there were but a line to say, "Pardon me; I was wrong," everything might yet be right. But Ruth Jacobi was the bearer of no note from Anton, nor indeed had she come on her present message with her uncle's knowledge. She had put a heavy basket on the table, and now, running forward, took Nina by the hands, and kissed her.

"We have been so sorry, all of us, to hear of your father's illness," said Ruth.

"Father is very ill," said Nina. "He is dying."

"Nay, Nina; it may be that he is not dying. Life and death both are in the hands of God."

"Yes; it is in God's hands of course; but the doctor says that he will die."

"The doctors have no right to speak in that way," said Ruth, "for how can they know God's pleasure? It may be that he will recover."

"Yes; it may be," said Nina. "It is good of you to come to me, Ruth. I am so glad you have come. Have you any — any — message?" If he would only ask to be forgiven through Ruth, or even if he had sent a word that might be taken to show that he wished to be forgiven, it should suffice.

"I have — brought — a few things in a basket," said Ruth, almost apologetically.

Then Nina lifted the basket. "You did not surely carry this through the streets?"

"I had Shadrach, our boy, with me. He carried it. It is not from me, exactly; though I have been so glad to come with it."

"And who sent it?" said Nina, quickly, with her fingers trembling on its lid. If Anton had thought to send anything to her, that anything should suffice.

"It was Rebecca Loth who thought of it, and who asked me to come," said Ruth.

Then Nina drew back her fingers as though they were burned, and walked away from the table with quick angry steps. "Why should Rebecca Loth send anything to me?" she said. "What is there in the basket?"

"She has written a little line. It is at the top. But she has asked me to say —"

"What has she asked you to say? Why should she say anything to me?"

"Nay, Nina; she is very good, and she loves you."

"I do not want her love."

"I am to say to you that she has heard of your distress, and she hopes that a girl like you will let a girl like her do what she can to comfort you."

"She cannot comfort me."

"She bade me say that if she were ill, or in sorrow, there is no hand from which she would so gladly take comfort as from yours; — for the sake, she said, of a mutual friend."

"I have no — friend," said Nina.

"Oh, Nina, am not I your friend? Do not I love you?"

"I do not know. If you do love me now, you must cease to love me. You are a Jewess, and I am a Christian, and we must live apart. You, at least, must live. I wish you would tell the boy that he may take back the basket."

"There are things in it for your father, Nina; and, Nina, surely you will read Rebecca's note?"

Then Ruth went to the basket, and from the top she took out Rebecca's letter, and gave it to Nina, and Nina read it. It was as follows: —

"I shall always regard you as very dear to me, because our hearts have been turned in the same way. It may not be perhaps that we shall know each other much at first; but I hope the days may come when we shall be much older than we are now, and that then we may meet and be able to talk of what has passed without pain. I do not know why a Jewess and a Christian woman should not be friends."

"I have sent a few things which may perhaps be of comfort to your father. In pity to me do not refuse them. They are such as one woman should send to another. And I have added a little trifle for your own use. At the present moment you are poor as to money, though so rich in the gifts which make men love. On my knees before you I ask you to accept from my hand what I send, and to think of me as one who would serve you in more things if it were possible. Yours, if you will let me, affectionately, REBECCA."

"I see when I look at them that the shoes will be too big."

She stood for a while apart from Ruth, with the open note in her hand, thinking whether or no she would accept the gifts which had been sent. The words which Rebecca had written had softened her heart, especially those in which the Jewess had spoken openly to her of her poverty. "At the present moment you are poor as to money," the girl had said, and had said it as though such poverty were, after all, but a small thing in their relative positions one to another. That Nina should be loved, and Rebecca not loved, was a much greater thing. For her father's sake she would take the things sent, — and for Rebecca's sake. She would take even the shoes, which she wanted so sorely. She remembered well, as she read the last word, how, when Rebecca had been with her, she

herself had pointed to the poor broken slippers which she wore, not meaning to excite such compassion as had now been shown. Yes, she would accept it all — as one woman should take such things from another.

"You will not make Shadrach carry them back?" said Ruth, imploring her.

"But he; — has he sent nothing? — not a word?" She would have thought herself to be utterly incapable, before Ruth had come, of showing so much weakness; but her reserve gave way as she admitted in her own heart the kindness of Rebecca, and she became conquered and humbled. She was so terribly in want of his love at this moment! "And has he sent no word of a message to me?"

"I did not tell him that I was coming."

"But he knows; — he knows that father is so ill."

"Yes; I suppose he has heard that, because Souchev came to the house. But he has been out of temper with us all, and unhappy for some days past. I know that he is unhappy when he is so harsh with us."

"And what has made him unhappy?"

"Nay, I cannot tell you that. I thought perhaps it was because you did not come to him. You used to come and see us at our house."

Dear Ruth! Dearest Ruth, for saying such dear words! She had done more than Rebecca by the sweetness of the suggestion. If it were really the case that he were unhappy because they had parted from each other in anger, no further forgiveness would be necessary.

"But how can I come, Ruth?" she said.

"It is he that should come to me."

"You used to come."

"Ah, yes. I came first with messages from father, and then because I loved to hear him talk to me. I do not mind telling you, Ruth, now. And then I came because, — because he said I was to be his wife. I thought that if I was to be his wife it could not be wrong that I should go to his father's house. But now that so many people know it, — that they talk about it so much, — I cannot go to him now."

"But you are not ashamed of being engaged to him — because he is a Jew!"

"No," said Nina, raising herself to her full height; "I am not ashamed of him. I am proud of him. To my thinking there is no man like him. Compare him and Ziska, and Ziska becomes hardly a man at all. I am very proud to think that he has chosen me."

"That is well spoken, and I shall tell him."

"No, you must not tell him, Ruth. Remember that I talk to you as a friend, and not as a child."

"But I will tell him, because then his brow will become smooth, and he will be happy. He likes to think that people know him to be clever; and he will be glad to be told that you understand him."

"I think him greater and better than all men; but, Ruth, you must not tell him what I say — not now, at least — for a reason."

"What reason, Nina?"

"Well; I will tell you, though I would not tell any one else in the world. When we parted last I was angry with him—very angry with him."

"He had been scolding you, perhaps?"

"I should not mind that—not in the least. He has a right to scold me."

"He has a right to scold me, I suppose; but I mind it very much."

"But he has no right to distrust me, Ruth. I wish he could see my heart and all my mind, and know every thought in my breast, and then he would feel that he could trust me. I would not deceive him by a word or a look for all the world. He does not know how true I am to him, and that kills me."

"I will tell him everything."

"No, Ruth; tell him nothing. If he cannot find it out without being told, telling will do no good. If you thought a person was a thief, would you change your mind because the person told you he was honest? He must find it out for himself if he is ever to know it."

When Ruth was gone, Nina knew that she had been comforted. To have spoken about her lover was in itself much; and to have spoken about him as she had done seemed almost to have brought him once more near to her. Ruth had declared that Anton was sad, and had suggested to Nina that the cause of his sadness was the same as her own. There could not but be comfort in this. If he really wished to see her, would he not come over to the Kleinseite? There could be no reason why he should not visit the girl he intended to marry, and whom he was longing to see. Of course he had business which must occupy his time. He could not give up every moment to thoughts of love, as she could do. She told herself all this, and once more endeavoured to be comforted.

And then she unpacked the basket. There were fresh eggs, and a quantity of jelly, and some soup in a jug ready to be made hot, and such delicacies as invalids will eat when their appetites will serve for nothing else. And Nina, as she took these things out, thought only of her father. She took them as coming for him altogether, without any reference to her own use. But at the bottom of the basket there were stockings, and a handkerchief or two, and a petticoat, and a pair of shoes. Should she throw them out among the ashes behind the kitchen, or should she press them to her bosom as treasures to be loved as long as a single thread of them might hang together? She had taken such aims before—from her aunt Sophie—taking them in bitterness of spirit, and wearing them as though they were made of sackcloth, very sore to the skin. The acceptance of such things, even from her aunt, had been gall to her; but, in the old days, no idea of refusing them had come to her. Of course she must submit herself to her aunt's charity, because of her father's poverty. And garments had come to her which were old and worn, bearing unmistakable signs of Lotta's coarse but repar-

ative energies,—raiment against which her feminine niceness would have rebelled, had it been possible for her, in her misfortunes, to indulge her feminine niceness.

But there was a sweet scent of last summer's roses on the things which now lay in her lap, and each article was of the best; and, though each had been worn, they were all such as one girl would lend to another who was her dearest friend,—who was to be made welcome to the wardrobe as though it were her own. There was something of the tenderness of love in the very folding, and respect as well as friendship in the care of the packing. Her aunt's left-off clothes had come to her in a big roll, fastened with a corking-pin. But Rebecca, with delicate fingers, had made each article of her tribute to look pretty, as though, for the dress of such a one as Nina, prettiness and care must always be needed. It was not possible for her to refuse a present sent to her with so many signs of tenderness.

And then she tried on the shoes. Of all the things she needed these were the most necessary. At her first glance she thought that they were new; but she perceived that they had been worn, and she liked them the better on that account. She put her feet into them and found that they were in truth a little too large for her. And this, even this, tended in some sort to gratify her feelings and soothe the asperity of her grief. "It is only a quarter of a size," she said to herself as she held up her dress, that she might look at her feet. And thus she resolved that she would accept her rival's kindness.

On the following morning the priest came—that Father Jerome whom she had known as a child, and from whom she had been unable to obtain ghostly comfort since she had come in contact with the Jew. Her aunt and her father, Souchey and Lotta Luxa, had all threatened her with Father Jerome; and when it had become manifest to her that it would be necessary that the priest should visit her father in his extremity, she had at first thought that it would be well for her to hide herself. But the cowardice of this had appeared to her to be mean, and she had resolved that she would meet her old friend at her father's bedside. After all, what would his bitterest words be to her after such words as she had endured from her lover?

Father Jerome came, and she received him in the parlour. She received him with downcast eyes and a demeanour of humility, though she was resolved to flare up against him if he should attack her too cruelly. But the man was as mild to her and as kind as ever he had been in her childhood, when he would kiss her, and call her his little nun, and tell her that if she would be a good girl she should always have a white dress and roses at the festival of St. Nicholas. He put his hand on her head and blessed her, and did not seem to have any abhorrence of her because she was going to marry a Jew. And yet he knew it.

He asked a few words as to her father, who was indeed better on this morning than he had

been for the last few days, and then he passed on into the sick man's room. And there, after a few faintest words of confession from the sick man, Nina knelt by her father's bedside, while the priest prayed for them both, and forgave the sinner his sins, and prepared him for his further journey with such preparation as the extreme unction of his Church would afford.

When the prayer and the ceremony were over, and the viaticum had been duly administered, the priest returned into the parlour, and Nina followed him. "He is stronger than I had expected to find him," said Father Jerome.

"He has rallied a little, father, because you were coming. You may be sure that he is very ill."

"I know that he is very ill, but I think that he may still last some days. Should it be so, I will come again." After that, Nina thought that the priest would have gone; but he paused for a few moments as though hesitating, and then spoke again, putting down his hat, which he had taken up. "But what is all this that I hear about you, Nina?"

"All what?" said Nina, blushing.

"They tell me that you have engaged yourself to marry Anton Trendelsohn, the Jew." She stood before him confessing her guilt by her silence. "Is it true, Nina?" he asked.

"It is true."

"I am very sorry for that;—very sorry. Could you not bring yourself to love some Christian youth, rather than a Jew? Would it not be better, do you think, to do so—for your soul's sake?"

"It is too late now, father."

"Too late! No; it can never be too late to repent of evil."

"But why should it be evil, Father Jerome? It is permitted; is it not?"

"The law permits it, certainly."

"And when I am a Jew's wife, may I not go to mass?"

"Yes;—you may go to mass. Who can hinder you?"

"And if I pray devoutly, will not the saints hear me?"

"It is not for me to limit their mercy. I think that they will hear all prayers that are addressed to them with faith and humility."

"And you, father, will you not give me absolution if I am a Jew's wife?"

"I would ten times sooner give it you as the wife of a Christian, Nina. My absolution would be nothing to you, Nina, if the while you had a deep sin upon your conscience."

Then the priest went, being unwilling to endure further questioning, and Nina seated herself in a glow of triumph. And this was the worst that she would have to endure from the Church after all her aunt's threatenings,—after Lotta's bitter words, and the reproaches of all around her! Father Jerome—even Father Jerome himself, who was known to be the strictest priest on that side of the river in opposing the iniquities of his flock—did not take upon himself to say that her case as a Christian

would be hopeless, were she to marry the Jew! After that she went to the drawer in her bedroom, and restored the picture of the Virgin to its place.

CHAPTER XIV.

FATHER JEROME had been very mild with Nina, but his mildness did not produce any corresponding feelings of gentleness in the breasts of Nina's relatives in the Windberg-gasse. Indeed, it had the contrary effect of instigating Madame Zamenoy and Lotta Luxa to new exertions. Nina, in her triumph, could not restrain herself from telling Souchev that Father Jerome did not by any means think so badly of her as did the others; and Souchev, partly in defence of Nina, and partly in quest of further sound information on the knotty religious difficulty involved, repeated it all to Lotta. Among them they succeeded in cutting Souchev's ground from under him as far as any defence of Nina was concerned, and they succeeded also in solving his religious doubts. Poor Souchev was at last convinced that the best service he could render to his mistress was to save her from marrying the Jew, let the means by which this was to be done be, almost, what they might.

As the result of this teaching, Souchev went late one afternoon to the Jews' quarter. He did not go thither direct from the house in the Kleinseite, but from Madame Zamenoy's abode, where he had again dined previously in Lotta's presence. Madame Zamenoy herself had condescended to enlighten his mind on the subject of Nina's peril, and had gone so far as to invite him to hear a few words on the subject from a priest on that side of the water. Souchev had only heard Nina's report of what Father Jerome had said, but he was listening with his own ears while the other priest declared his opinion that things would go very badly with any Christian girl who might marry a Jew. This sufficed for him; and then—having been so far enlightened by Madame Zamenoy herself—he accepted a little commission, which took him to the Jew's house. Lotta had had much difficulty in arranging this; for Souchev was not open to a bribe in the matter, and on that account was able to press his legitimate suit very closely. Before he would start on his errand to the Jew, Lotta was almost obliged to promise that she would yield.

It was late in the afternoon when he got to Trendelsohn's house. He had never been there before, though he well knew the exact spot on which it stood, and had often looked up at the windows, regarding the place with unpleasant suspicions; for he knew that Trendelsohn was now the owner of the property that had once been his master's, and, of course, as a good Christian, he believed that the Jew had obtained Balatka's money by robbery and fraud. He hesitated a moment before he presented himself at the door, having some fear at

his heart. He knew that he was doing right, but these Jews in their own quarter were uncanny, and might be dangerous! To Anton Trendellohn, over in the Kleinseite, Souchev could be independent, and perhaps on occasions a little insolent; but of Anton Trendellohn in his own domains he almost acknowledged to himself that he was afraid. Lotta had told him that, if Anton were not at home, his commission could be done as well with the old man; and as he at last made his way round the synagogue to the house door, he determined that he would ask for the elder Jew. That which he had to say, he thought, might be said easier to the father than to the son.

The door of the house stood open, and Souchev, who, in his confusion, missed the bell, entered the passage. The little oil-lamp still hung there, giving a mysterious glimmer of light, which he did not at all enjoy. He walked on very slowly, trying to get courage to call, when, of a sudden, he perceived that there was a figure of a man standing close to him in the gloom. He gave a little start, barely suppressing a scream, and then perceived that the man was Anton Trendellohn himself. Anton, hearing steps in the passage, had come out from the room on the ground-floor, and had seen Souchev before Souchev had seen him.

"You have come from Josef Balatka's," said the Jew. "How is the old man?"

Souchev took off his cap and bowed, and muttered something as to his having come upon an errand. "And my master is something better to-day," he said, "thanks be to God for all His mercies!"

"Amen," said the Jew.

"But it will only last a day or two; no more than that," said Souchev. "He has had the doctor and the priest, and they both say that it is all over with him for this world."

"And Nina—you have brought some message probably from her?"

"No—no indeed; that is, not exactly; not to-day, Herr Trendellohn. The truth is, I had wished to speak a word or two to you about the maiden; but perhaps you are engaged—perhaps another time would be better."

"I am not engaged, and no other time could be better."

They were still out in the passage, and Souchev hesitated. That which he had to say it would behoove him to whisper into the closest privacy of the Jew's ear—into the ear of the old Jew or of the young. "It is something very particular," said Souchev.

"Very particular—is it?" said the Jew.

"Very particular indeed," said Souchev. Then Anton Trendellohn led the way back into the dark room on the ground-floor from whence he had come, and invited Souchev to follow him. The shutters were up, and the place was seldom used. There was a counter running through it, and a cross-counter, such as are very common when seen by the light of day in shops; but the place seemed to be

mysterious to Souchev; and always afterwards, when he thought of this interview, he remembered that his tale had been told in the gloom of a chamber that had never been arranged for honest Christian purposes.

"And now, what is it you have to tell me?" said the Jew.

After some fashion Souchev told his tale, and the Jew listened to him without a word of interruption. More than once Souchev had paused, hoping that the Jew would say something; but not a sound had fallen from Trendellohn till Souchev's tale was done.

"And it is so—is it?" said the Jew when Souchev ceased to speak. There was nothing in his voice which seemed to indicate either sorrow or joy, or even surprise.

"Yes, it is so," said Souchev.

"And how much am I to pay you for the information?" the Jew asked.

"You are to pay me nothing," said Souchev.

"What! you betray your mistress gratis?"

"I do not betray her," said Souchev. "I love her, and the old man too. I have been with them through fair weather and through foul. I have not betrayed her."

"Then why have you come to me with this story?"

The whole truth was almost on Souchev's tongue. He had almost said that his sole object was to save his mistress from the disgrace of marrying a Jew. But he checked himself, then paused a moment, and then left the room and the house abruptly. He had done his commission, and the fewer words which he might have with the Jew after that the better.

On the following morning, Nina was seated by her father's bedside, when her quick ear caught through the open door the sound of a footstep in the hall below. She looked for a moment at the old man, and saw that if not sleeping he appeared to sleep. She leaned over him for a moment, gave one gentle touch with her hand to the bed-clothes, then crept out into the parlour, and closed behind her the door of the bedroom. When in the middle of the outer chamber she listened again, and there was clearly a step on the stairs. She listened again, and she knew that the step was the step of her lover. He had come to her at last, then. Now, at this moment, she lost all remembrance of her need of forgiving him. Forgiving him! What could there be to be forgiven to one who could make her so happy as she felt herself to be at this moment? She opened the door of the room just as he had raised his hand to knock, and threw herself into his arms. "Anton, dearest, you have come at last. But I am not going to scold. I am so glad that you have come, my own one!"

While she was yet speaking, he brought her back into the room, supporting her with his arm round her waist; and when the door was closed he stood over her, still holding her up, and looking down into her face, which was turned up to his. "Why do you not speak to me, Anton?" she said. But she smiled as she spoke, and

there was nothing of fear in the tone of her voice, for his look was kind, and there was love in his eyes.

He stooped down over her, and fastened his lips upon her forehead. She pressed herself closer against his shoulder, and shutting her eyes, as she gave herself up to the rapture of his embrace, told herself that now all should be well with them.

"Dear Nina," he said. "Dearest, dearest Anton," she replied.

And then he asked after her father; and the two sat together for a while, with their knees almost touching, talking in whispers as to the condition of the old man. And they were still so sitting, and still so talking, when Nina rose from her chair, and put up her forefinger with a slight motion for silence, and a pretty look of mutual interest — as though Anton were already one of the same family; and, touching his hair lightly with her hand as she passed him, that he might feel how delighted she was to be able so to touch him, she went back to the door of the bedroom on tiptoe, and lifting the latch without a sound, put in her head and listened. But the sick man had not stirred. His face was still turned from her, as though he slept, and then, again closing the door, she came back to her lover.

"He is quite quiet," she said, whispering.

"Does he suffer?"

"I think not; he never complains; when he is awake he will sit with my hand within his own, and now and again there is a little pressure."

"And he says nothing?"

"Very little; hardly a word now and then; when he does speak, it is of his food."

"He can eat, then?"

"A morsel of jelly, or a little soup. But, Anton, I must tell you; I tell you everything, you know; where do you think the things that he takes have come from? But perhaps you know."

"Indeed I do not."

"They were sent to me by Rebecca Loth."

"By Rebecca?"

"Yes; by your friend Rebecca. She must be a good girl."

"She is a good girl, Nina."

"And you shall know everything; see — she sent me these," and Nina showed her shoes; "and the very stockings I have on; I am not ashamed that you should know."

"Your want, then, has been so great as that?"

"Father has been very poor. How should he not be poor when nothing is earned? And she came here, and she saw it."

"She sent you these things?"

"Yes; Ruth came with them; there was a great basket with nourishing food for father. It was very kind of her. But, Anton, Rebecca says that I ought not to marry you, because of our religion. She says all the Jews in Prague will become your enemies."

"We will not stay in Prague; we will go

elsewhere; there are other cities besides Prague."

"Where nobody will know us?"

"Where we will not be ashamed to be known."

"I told Rebecca that I would give you back all your promises, if you wished me to do so."

"I do not wish it. I will not give you back your promises, Nina."

The enraptured girl again clung to him. "My own one," she said, "my darling, my husband; when you speak to me like that, there is no girl in Bohemia so happy as I am. Hush! I thought it was father. But no: there is no sound. I do not mind what any one says to me, as long as you are kind."

She was now sitting on his knee, and his arm was round her waist, and she was resting her head against his brow; he had asked for no pardon, but all the past was entirely forgiven; why should she even think of it again? Some such thought was passing through her mind, when he spoke a word, and it seemed as though a dagger had gone into her heart. "About that paper, Nina?" "Accursed document, that it should be brought again between them to dash the cup of joy from her lips at such a moment as this! She disengaged herself from his embrace, almost with a leap. "Well! what about the paper?" she said.

"Simply this, that I would wish to know where it is."

"And you think I have it?"

"No; I do not think so; I am perplexed about it, hardly knowing what to believe; but I do not think you have it; I think that you know nothing of it."

"Then why do you mention it again, reminding me of the cruel words which you spoke before?"

"Because it is necessary for both our sakes. I will tell you plainly just what I have heard: your servant Souchey has been with me, and he says that you have it."

"Souchey!"

"Yes; Souchey. It seemed strange enough to me, for I had always thought him to be your friend."

"Souchey has told you that I have got it?"

"He says that it is in that desk," and the Jew pointed to the old depository of all the treasures which Nina possessed.

"He is a liar."

"I think he is so, though I cannot tell why he should have so lied; but I think he is a liar; I do not believe that it is there; but in such a matter it is well that the fact should be put beyond all dispute. You will not object to my looking into the desk?" He had come there with a fixed resolve that he would demand to search among her papers. It was very unpleasant to him, and he knew that his doing so would be painful to her; but he told himself that it would be best for them both that he should persevere.

"Will you open it, or shall I?" he said; and

as he spoke, she looked into his face, and saw that all tenderness and love were banished from it, and that the hard suspicious greed of the Jew was there instead.

"I will not unlock it," she said; "there is the key, and you can do as you please." Then she flung the key upon the table, and stood with her back up against the wall, at some ten paces distant from the spot where the desk stood. He took up the key, and placed it remorselessly in the lock, and opened the desk, and brought all the papers forth on to the table which stood in the middle of the room.

"Are all my letters to be read?" she asked.

"Nothing is to be read," he said.

"Not that I should mind it; or at least I should have cared but little ten minutes since. There are words there may make you think I have been a fool, but a fool only too faithful to you."

He made no answer to this, but moved the papers one by one carefully till he came to a folded document larger than the others. Why dwell upon it? Of course it was the deed for which he was searching. Nina, when from her station by the wall she saw that there was something in her lover's hands of which she had no knowledge, something which had been in her own desk without her privity,—came forward a step or two, looking with all her eyes. But she did not speak till he had spoken; nor did he speak at once. He slowly unfolded the document, and perused the heading of it; then he refolded it, and placed it on the table, and stood there with his hand upon it.

"This," said he, "is the paper for which I am looking. Souchey, at any rate, is not a liar."

"How came it there?" said Nina, almost screaming in her agony.

"That I know not; but Souchey is not a liar; nor were your aunt and her servant liars in telling me that I should find it in your hands."

"Anton," she said, "as the Lord made me, I knew not of it;" and she fell on her knees before his feet.

He looked down upon her, scanning every feature of her face and every gesture of her body with hard inquiring eyes. He did not stoop to raise her, nor, at the moment, did he say a word to comfort her. "And you think that I stole it and put it there?" she said. She did not quail before his eyes, but seemed, though kneeling before him, to look up at him as though she would defy him. When first she had sunk upon the ground, she had been weak, and wanted pardon though she was ignorant of all offence; but his hardness, as he stood with his eyes fixed upon her, had hardened her, and all her intellect, though not her heart, was in revolt against him. "You think that I have robbed you?"

"I do not know what to think," he said.

Then she rose slowly to her feet, and, collecting the papers which he had strewn upon the table, put them back slowly into the desk, and locked it.

"You have done with this now?" she said, holding the key in her hand.

"Yes; I do not want the key again."

"And you have done with me also?"

He paused a moment or two to collect his thoughts, and then he answered her. "Nina, I would wish to think about this before I speak of it more fully. What step I may next take I cannot say without considering it much. I would not wish to pain you if I could help it."

"Tell me at once what it is that you believe of me?"

"I cannot tell you at once. Rebecca Loth is friendly to you, and I will send her to you to-morrow."

"I will not see Rebecca Loth," said Nina. "Hush! there is father's voice. Anton, I have nothing more to say to you;—nothing—nothing." Then she left him, and went into her father's room.

For some minutes she was busy by her father's bed, and went about her work with a determined alacrity, as though she would wipe out of her mind altogether, for the moment, any thought about her love and the Jew, and the document that had been found in her desk; and for a while she was successful, with a consciousness, indeed, that she was under the pressure of a terrible calamity which must destroy her, but still with an outward presence of mind that supported her in her work. And her father spoke to her, saying more to her than he had done for days past, thanking her for her care, patting her hand with his, caressing her, and bidding her still be of good cheer, as God would certainly be good to one who had been so excellent a daughter. "But I wish, Nina, he were not a Jew," he said, suddenly.

"Dear father, we will not talk of that now."

"And he is a stern man, Nina."

But on this subject she would speak no further, and therefore she left the bedside for a moment, and offered him a cup, from which he drank. When he had tasted it, he forgot the matter that had been in his mind, and said no further word as to Nina's engagement.

As soon as she had taken the cup from her father's hand, she returned to the parlour. It might be that Anton was still there. She had left him in the room, and had shut her ears against the sound of his steps, as though she were resolved that she would care nothing ever again for his coming or going. He was gone, however, and the room was empty, and she sat down in solitude, with her back against the wall, and began to realize her position. He had told her that others accused her, but that he had not suspected her. He had not suspected her, but he had thought it necessary to search, and had found in her possession that which had made her guilty in his eyes!

She would never see him again;—never willingly. It was not only that he would never forgive her, but that she could never now be brought to forgive him. He had stabbed her while her words of love were warmest in his ear. His foul suspicions had been present to

his mind even while she was caressing him. He had never known what it was to give himself up really to his love for one moment. While she was seated on his knee, with her head pressed against his, his intellect had been busy with the key and the desk, as though he were a policeman looking for a thief, rather than a lover happy in the endearments of his mistress. Her vivid mind pictured all this to her, filling her full with every incident of the insult she had endured. No. There must be an end of it now. If she could see her aunt that moment, or Lotta, or even Ziska, she would tell them that it should be so. She would say nothing to Anton;—no, not a word again, though both might live for an eternity; but she would write a line to Rebecca Loth, and tell the Jewess that the Jew was now free to marry whom he would among his own people. And some of the words that she thought would be fitting for such a letter occurred to her as she sat there. "I know now that a Jew and a Christian ought not to love each other as we loved. Their hearts are different." That was her present purpose, but, as will be seen, she changed it afterwards.

But ever and again as she strengthened her resolution, her thoughts would run from her, carrying her back to the sweet rapture of some moment in which the man had been gracious to her; and even while she was struggling to teach herself to hate him, she would lean her head on one side, as though by doing so she might once more touch his brow with hers; and unconsciously she would put out her fingers, as though they might find their way into his hand. And then she would draw them back with a shudder, as though recoiling from the touch of an adder.

Hours had passed over her before she began to think whence had come the paper which Trendellsohn had found in her desk; and then, when the idea of some fraud presented itself to her, that part of the subject did not seem to her to be of great moment. It mattered but little who had betrayed her. It might be Rebecca, or Souchev, or Ruth, or Lotta, or all of them together. His love, his knowledge of her whom he loved, should have carried him aloft out of the reach of any such poor trick as that! What mattered it now who had stolen her key, and gone like a thief to her desk, and laid this plot for her destruction? That he should have been capable of being deceived by such a plot against her was enough for her. She did not even speak to Souchev on the subject. In the course of the afternoon he came across her as she moved about the house, looking ashamed, not daring to meet her eyes, hardly able to mutter a word to her. But she said not a syllable to him about her desk. She could not bring herself to plead the cause between her and her lover before her father's servant.

The greater part of the day she passed by her father's bedside, but whenever she could escape from the room, she seated herself in the

chair against the wall, endeavouring to make up her mind as to the future. But there was much more of passion than of thought within her breast. Never, never, never would she forgive him! Never again would she sit on his knee caressing him. Never again would she even speak to him. Nothing would she take from his hand, or from the hands of his friends! Nor would she ever stoop to take aught from her aunt, or from Ziska. They had triumphed over her. She knew not how. They had triumphed over her, but the triumph should be very bitter to them—very bitter, if there was any touch of humanity left among them.

Later in the day there came to her something of motion in the house. Her father was worse in health, was going fast, and the doctor was again there. And in these moments Souchev was with her, busy in the dying man's room; and there were gentle kind words spoken between him and Nina—as would be natural between such persons at such a time. He knew that he had been a traitor, and the thought of his treachery was heavy at his heart; but he perceived that no immediate punishment was to come upon him, and it was some solace to him that he could be sedulous and gentle and tender. And Nina, though she knew that the man had given his aid in destroying her, bore with him not only without a hard word, but almost without a severe thought. What did it matter what such a one as Souchev could do?

In the middle watches of that night, the old man died, and Nina was alone in the world. Souchev, indeed, was with her in the house, and took from her all painful charge of the bed at which now her care could no longer be of use. And early in the morning, while it was yet dark, Lotta came down, and spoke words to her, of which she remembered nothing. And then she knew that her aunt Sophie was there, and that some offers were made to her at which she only shook her head. "Of course you will come up to us," aunt Sophie said. And she made many more suggestions, in answer to all of which Nina only shook her head. Then her aunt and Nina, with Lotta's aid, fixed upon some plan,—Nina hardly knew what,—as to the morrow. She did not care to know what it was that they fixed. They were going to leave her alone for this day, and the day would be very long. She told herself that it would be long enough for her.

The day was very long. When her aunt had left her, she saw no one but Souchev and an old woman who was busy in the bedroom which was now closed. She had stood at the foot of the bed with her aunt, but after that she did not return to the chamber. It was not only her father who, for her, was now lying dead. She had loved her father well, but with a love infinitely greater she had loved another; and that other one was now dead to her also. What was there left to her in the world? The charity of her aunt, and Lotta's triumph, and Ziska's love? No, indeed! She would bear neither the charity, nor the triumph, nor the love. One

other visitor came to the house that day. It was Rebecca Loth. But Nina refused to see Rebecca. "Tell her," she said to Souchev, "that I cannot see a stranger while my father is lying dead." How often did the idea occur to her, throughout the terrible length of that day, that "he" might come to her? But he came not. "So much the better," she said to herself. "Were he to come, I would not see him."

Late in the evening, when the little lamp in the room had been already burning for some hour or two, she called Souchev to her. "Take this note," she said, "to Anton Trendelssohn."

"What! to-night?" said Souchev, trembling.

"Yes, to-night. It is right that he should know that the house is now his own, to do what he will with it."

Then Souchev took the note, which was as follows:—

"My father is dead, and the house will be empty to-morrow. You may come and take your property without fear that you will be troubled by

"NINA BALATKA."

NON-PLUS AND NON POSS.;

OR, THE POPE BETWEEN SEVERAL STOOLS.

We cannot own that two and two make four,
So long as the sun's worked in Liberal figures:

We cannot hold that human reason's more
Than a big blunderbuss, with feather-triggers:
We cannot give lay-gunners leave to load it,
To point it, fire it, its recoil to face:

We cannot see a safe way to explode it,
Without our priests to warn folks from the place.

And this protest we under seal and cross,
And our Pontifical NON POSS.; NON POSS.!

We cannot with our keys lock laymen's tongues;
Nor with our Fisher's seal seal laymen's eyes:
Nor with our staff, backed by infallible lungs,
Stay, more than CANUTE could, the ocean's rise:

Nor clap our triple crown o'er the sun's ball,
Nor to the dust restless Inquiry spurn,
And in its place Authority instal,
With the old rods to scourge, old fires to burn:

And this protest we under seal and cross,
And our Pontifical NON POSS.; NON POSS.!

We cannot stay in Rome that once was ours,
And own to Rome that it is ours no more:
We cannot keep out Italy, with flowers,
And loving looks, a wooer at the door:
We cannot turn Venetia's saffron veil
Into a pall to shroud, a mask to hide
The fair face now so bright, though pinched
and pale,

That smiles to Roman hope and Roman
pride!

And this protest we under seal and cross,
And our Pontifical NON POSS.; NON POSS.!

We cannot fly from Rome that still has been
The seven-hilled pedestal of PETER's chair;
Nor leave our Vatican, whence earth has seen
Our power grow high as heaven and wide as air.

Nor stoop from English heretics to crave
A roof for shelter, or a tomb for rest:
Nor act the sovereign, and be the slave,
As Paris' or Vienna's hostage-guest.

And this protest we under seal and cross,
And our Pontifical NON POSS.; NON POSS.!

We cannot be the young MASTAI again
Who prayed that Italy might yet be one:
Cannot re-ope the old PIO-NONO vein,
Where lay pulse beat and natural blood would run.

We cannot be, as when, alas, sun-blind,
At struggling Italy's new-birth we stood,
With hand upraised, and reverent head inclined,

To bless her baptism of fire and blood.
And this protest we under seal and cross,
And our Pontifical NON POSS.; NON POSS.!

We cannot be the Jesuit's supple slave,
MERODE's poor puppet, ANTONELLI's tool:
Cannot think LOUIS fool, or VICTOR knave;
Cannot doubt LOUIS knave, and VICTOR fool:

We cannot lend our name to those who hate
This Italy, which, spite of all, we love:
We cannot square our feelings and our fate,
Cannot stay as we are, and cannot move!

And this protest we under seal and cross,
And our Pontifical NON POSS.; NON POSS.!

— Punch.

From the Sunday Magazine.

A FORTNIGHT IN A DUTCH TOWN.

BY A LONDON CLERGYMAN.

DURING the autumn I staid for a fortnight in an out-of-the-world Dutch town, with my friends, Mr. and Mrs. Van der Kemp. I had made their acquaintance at a German watering-place, where I was seeking relief from the effects of overwork. As my lengthened residence in Germany had made me sufficiently well acquainted with the German tongue to understand the Dutch, which, in fact, is only a dialect of the German, I soon got into familiar intercourse with Mr. and Mrs. Van der Kemp, which led to a cordial friendship between us, for I clearly saw that they looked for their help and strength to the same Saviour from whom I drew my consolation. Indeed, we soon felt so attached that I could not resist their hearty invitation to accompany them to Holland that I might witness the happiness of their family life in the atmosphere of their prettily-situated country town.

To begin then with the town. Its numbers about 7,000 or 8,000 inhabitants, the greater portion of whom belong to the agricultural class. The upper class chiefly consists of landed proprietors and merchants, who conduct a considerable trade in cattle and corn; while the middle-class numbers many well-to-do tradesmen and shopkeepers. A market is held once a week, and on that day large crowds come into the town from the surrounding villages and farms. The market-place is large and neatly paved. It is surrounded by lofty well-built houses and shops, and is adorned at the upper end by a venerable Gothic cathedral, which, on such a day, presents a very interesting and cheerful aspect. It is easier to cross Cheap-side at noon than to walk across that densely-thronged square between the hours of eight and three. Little booths, protected from rain or sunshine by white canvas awnings, and containing refreshments or knick-knacks, form a long row which divides the market into two equal parts. On one side the corn-trade is carried on, while the cattle, carts, and carriages fill up the space on the other. Almost every living creature capable of moving about makes its appearance here about the middle of the day. Aristocratic-looking gentlemen are to be seen engaged in lively conversation with stout farmers, and slapping each other's hands in settling their bargains; while well-

dressed ladies work their way through the crowd, and stop every minute to exchange kind words with a peasant's wife, or to look at the novelties in the booths. Clergymen, too, from the neighbouring parishes come to see their friends, or to attend their clerical meetings; but the stranger does not readily recognize them, for it is not customary with the clergy in Holland to wear a special ministerial dress on week-days. As my host lives in one of the finest houses in this central spot, I had ample opportunity of beholding the lively scene. Nor do I recollect ever having witnessed a sight in a town with greater pleasure, for I did not observe a single instance of disorderly conduct or drunkenness, while the kind, cheerful tone in which the people seemed to converse with each other made me even fancy that I was witnessing some large festive gathering. I saw only one policeman all the time I stood looking out on this human beehive, and having drawn Mrs. Van der Kemp's attention to the fact, she told me that, for aught she knew, there were only two or three of them in the town, and that these proved quite sufficient to keep the good citizens in safety. "Because," she added, with a smile, "stealing, you know, is forbidden amongst us."

I expressed to my friends the agreeable impression made upon me by the kind and peaceful tone of conversation that appeared to obtain amongst the people.

"Why," Mr. Van der Kemp answered, "we *do* enjoy a quiet, peaceful life here, and we are thankful for it in one sense; but I am sorry to say that it seems to me our peace rests upon a wrong foundation, since it is maintained at the expense of truth, and is, in fact, more a kind of lethargy than anything else. You would be very much mistaken if you were to suppose that we were really of one heart and one soul. First you must know that two-fifths of the population are Romanists. Between these and us Protestants there is no intercourse whatever, except at the market. This is not altogether owing to the circumstance of their belonging mostly to the lower class, but chiefly to the systematic carefulness of their priests to keep them aloof from Protestant influences, and to the fact that we are a thoroughly Protestant nation. You know, of course, that we owe our national independence to that noble eighty years' struggle which our forefathers carried on three centuries ago against popish priestcraft and Spanish tyranny, and which has been so admirably described in your language by Mr. Motley. Though the animosity which

existed in those days between the two parties has long since subsided, and we now live in peace together, yet separation has continued, from a kind of traditional habit in a small place like this, where people are so well acquainted with each other's history, circumstances, and religion. But apart from the Romanists, the Protestants themselves are divided into three parties; and though they also live in peace, yet they differ from each other in principle almost as much as Protestants do from Romanists. When I speak of parties, you must not think I mean sects. We have no sects in this place. We Protestants all belong to the National Church, which, as you know, is Calvinistic and Presbyterian. I think we number about five thousand people. We are not, as is the case in your country, divided into parishes. We are all members of one Church, which is under the charge of three ministers, who are assisted by a consistory composed of twelve elders, and as many deacons. The sole business of the latter is to look after the poor, and to administer the money that comes in from weekly collections in the churches, endowments, donations, &c. Now we have two places of public worship — the cathedral yonder, and a smaller church in another quarter of the town. In each of them we have three services every Sunday, and once on an evening during the week. The ministers regularly exchange with each other: Dr. Lakerman, for instance, preaches next Sunday morning in the cathedral, and the following Sunday morning in the other church, while one of his colleagues just does the reverse. Our little local paper tells us every Saturday in which church and at what hour each of the three gentlemen will officiate on the following Sunday. Now each of these three ministers represents a different system of divinity; Dr. Lakerman, a young man who left the University only three years ago, is what is called a 'modern theologian.' He is an advocate of the principles of Strauss and Renan, and consequently denies the divinity, the miracles, and the resurrection of our Lord; in short, he denies everything supernatural in the Bible. You will understand that Mrs. Van der Kemp and myself never attend his preaching, though the church is always crowded, and chiefly by the members of the upper class, for he is an eloquent preacher, and a man of great learning. But it is impossible for us to listen to a sermon, however ably delivered, in which our blessed Saviour is degraded to the level of a mere Jewish genius, if not even to that of an amiable though

erring fanatic. His colleague, Mr. Moor, is a man of about thirty-five, and is not quite so decided in infidel views as he is, but still there is a great deal of Gospel truth which he does not believe in. He goes under the name of 'the liberal minister,' to distinguish him from Dr. Lakerman, 'the modern minister,' and from Mr. Willems, again, who is 'the orthodox minister.' Mr. Moor belongs to the supernatural school. He acknowledges the divine inspiration of the Bible, and is far from denying all miracles. But there are *some* miracles which he does not believe in, and there are *some* doctrines which he rejects. To bring this arbitrary way of believing and rejecting what he pleases into harmony with his unlimited reverence for the Bible as being a divinely inspired book, he avails himself of a peculiar method of interpretation which he often cleverly applies, and by which he leaves the letter of the Word intact, while he succeeds in putting a sense into it which in the end simply makes the Bible say the very opposite of what it means to say. For instance, he is an Arian, and rejects the Godhead of our Lord, but to harmonize this opinion with those texts in Scripture in which Christ is called God, he knows how to talk so subtly and philosophically on the term 'God,' that in the end it comes to mean 'a creature.' He is a man of what is called 'the golden mean,' not too infidel, and not too credulous, submitting his reason to the Bible, where the Bible (in his opinion) is not too absurd, and submitting the Bible to his reason where his reason is too obstinate. Of the third minister, Mr. Willems, I have only to say that he is a good and faithful preacher of Gospel truth. He is a man in the prime of life; his audiences are as numerous as those of Dr. Lakerman, but they consist chiefly of members of the middle and lower classes, with the exception of a few wealthy merchants and landed proprietors who are known as the leaders of the orthodox party here. I need not tell you that Mrs. Van der Kemp and myself always attend his service, except, it may be, when he happens to preach in the little church and the weather will not permit us to go there. In that case we attend Mr. Moor's service in the cathedral, as he often preaches such sermons as would make a stranger, who is not acquainted with his opinions, believe that he is a good sound preacher."

This explanation of the state of religion in this Protestant Church sadly surprised me, and the more so as I learnt that matters were still worse in other towns throughout the kingdom. In fact, on further in-

quiry I found that the orthodox party among the Dutch clergy are in the minority, and that the so-called modern theology is making most alarming progress, especially among the younger and more talented of the clergy. This destructive system manifests its truly heathenish principle by stripping religion of everything divine, and lowering it to a compound of moral, æsthetic, and sentimental agencies for the cultivation and refinement of the purely human. What my friends told me about the profane, even blasphemous notions which these theologians at the present time preach from their pulpits and propagate in their writings, was something quite frightful. It is absurd to think of men who hold such opinions being even members of a Christian Church, much less teachers and pastors. Indeed, a few of them have felt the absurdity, and have been honourable enough to resign, not only their office but their membership in the Christian Church.

"But how is it possible that such a monstrous state of things can be tolerated in your Church?" I asked. "Is there no law and no government in it?"

"There is," replied Mr. Van der Kemp, "but both, alas! are powerless. You know, of course, that the creeds of the Reformed Churches are perfectly sound in point of doctrine. I have only to mention the Heidelberg Catechism, that jewel of a confession, which during more than two centuries has been the chief standard of faith of our Church. But since the synod of 1816, which was convoked by the king, the clergy have been relieved of their obligation to subscribe the creed, and instead have only to sign a formula of subscription which, being drawn up in very vague and general terms, really binds them to no doctrine at all. The supreme government of our Church is not in the hands of a General Assembly, as is the case with the Scotch Presbyterians, but in those of a few men, who are not chosen and appointed by the members of the Church, but by the Consistories, which are self-elected bodies. This supreme court, which is called 'the Synodical Commission,' meets once a year with closed doors at the Hague. It has no power to interfere in doctrinal controversies; and is, in fact, nothing more than a board of administration. Numerous protests and petitions have been sent up to it on the part of the orthodox party during the last thirty years, but they have all proved fruitless, and last year the court published a final answer, in which it confessed its impotence to cure the fearful confusion, and declared that no alternative

is left but to allow matters to take their own course. Sad, nay wicked, as that declaration is, yet one cannot marvel, for the men themselves who constitute that court are, with only one or two exceptions, members of either the liberal or the modern party."

"What an absurd and dangerous state of things!" I exclaimed. "But there are some parishes or churches in which the orthodox people are the majority, are there not?"

"Certainly, and they are not few, for the spirit of infidelity has not spread so widely amongst the people as amongst the clergy."

"Well, then, I expect that they at least have orthodox ministers."

"Most of them have, but there are not a few who have not. It all depends upon the spirit that prevails among the members of the consistory of a church, i.e., the elders and deacons, for they have the sole power of calling a minister. Now, in many churches in which the members are for the greater part orthodox, the elders and deacons are sceptics, and these compel the people to acknowledge as their minister a man whose doctrines they abhor."

"But then, do the people not have it in their power to withhold that man's salary?"

"The clergymen are not paid from contributions of the people, but partly from endowments, and for the greater part from the public exchequer. All clergymen in our country are state paid; the people, in fact, have nothing at all to say in the arrangement of Church matters. We do not choose our ministers, the elders and deacons choose them for us; we do not choose our elders and deacons, for should one of their places fall vacant the rest choose a successor without asking our consent; we do not choose the professors of divinity at our universities, the Government chooses them, and if the Government should appoint such men as Strauss and Renan, we have no power to prevent it. And we cannot send our young men to other colleges, for the rules of our Church admit of no preachers except those taught by the Government professors. And yet, with all this, our Church is no state establishment, for according to the charter, our king and his ministers are not bound to profess any religion. Our king, of course, is a member of our Church, because it is the church of the majority; but if he should choose to turn a Romanist or even a Jew, no legal proceedings could be taken against him. Among his ministers there are Romanists, and there have sometimes been Jews. All religious denominations have equal rights in our

country, and all of them are state paid unless they decline to accept the money. But this equality of rights, stipulated as it is in our charter, is yet carried out with gross injustice so far as regards the Church. For, while the other denominations, such as the Lutherans, the Mennonites, the Arminians, the Separatists, and even the Roman Catholics, are left perfectly at liberty to manage their own affairs, to appoint their own officials, and to have their own colleges or seminaries; we, on the contrary, *must* submit to those arbitrary, despotic, and absurd restrictions which I have stated to you."

I was quite at a loss to comprehend how such a state of things could be tolerated in a society of rational beings, not to speak of a Christian community.

"It must needs come to a separation amongst you," I said.

"Well, so we all think, and we have thought so for long; but the difficulty is, how to bring about a satisfactory secession. Of course we orthodox people might go out at any moment and found a church of our own. Nothing in the laws could prevent us doing so. But then we should have to leave all our cathedrals, churches, school-rooms, in short all our church property, in the hands of the infidels. We should deem that a gross injustice towards the cause of truth, for we are *de jure* the sole proprietors of the Church property, and the infidels ought to leave the Church, because it is *they* who have fallen away from the creed and broken the rules of the Church of our fathers."

The following day we were invited to take coffee at Mr. and Mrs. van Kolen's, who were friends and neighbours of my host. Now it must be known that what the Dutch call the "coffee hour" corresponds with our luncheon time. In country places, where the respectable class seldom dine later than two or three o'clock, this "coffee hour" is about eleven. The lunch only consists of coffee and little cakes or tarts. The savoury liquid is poured from a polished brass urn, or a china filter-pot, into small china cups, which are served at long intervals, so that the "coffee hour" lasts at least for two hours, during which the gentlemen smoke long clay pipes or cigars, and the ladies knit stockings. When I entered the spacious, high-roofed, comfortable-looking parlour, I saw the coffee-urn on the table amongst little piles of cups and saucers and dessert-plates, and a couple of japanned tin boxes containing the cakes and tarts. Behind the urn were an oblong square mahogany case containing clay pipes, and two

little vases with cigars in them; and a square mahogany tobacco box and a little apparatus for lucifer matches, as well as a little chafing dish containing a piece of red-hot coal, at which the gentlemen could light their pipes.

Mr. van Kolen is a merchant in affluent circumstances, and an elder in the Church. He belongs to the "liberal party," and had invited his minister, Mr. Moor, as he courteously observed to me, in order "that he might enjoy the privilege of making the acquaintance of an English clergyman." Accordingly the Rev. Mr. Moor and his wife soon made their appearance. He was an intelligent-looking man, rather stately in his manners, but with a very open and frank expression, which promised some cheerful conversation.

The usual complimentary phrases over, we soon got into a talk in which all the friends present took part. We were led to discuss the similarities and the differences between the languages and customs of England and of the Continent, by the circumstance of Mr. Moor's taking a pipe which the mistress of the house courteously offered to him, whereas I declined it with an assumed expression of dislike. It was not long however before Mrs. Van der Kemp, who was a little of a controversialist, found a suitable opportunity of asking Mr. Moor a question about a passage in the sermon he had heard him preach the Sunday before. "She could not understand," she said, "how he could have averred that the poor man in the Gospel, who was possessed of a legion of evil spirits, was only insane, since it was so clearly stated that there were invisible beings dwelling in him and speaking through his mouth." Mr. Moor, far from showing any surprise at his being thus called to account for his opinions, appeared quite pleased, which made me suppose that he must be well accustomed to such inquiries. I was confirmed in this supposition by the easy and familiar manner in which all the other members of the company at once took part in the discussion, which, notwithstanding that the opinions differed greatly, was conducted in a lively, spirited way, and appeared not to interfere in the slightest degree with the good feelings of the parties. I could not help thinking, as they talked, that this freedom of discussion on religious matters between the minister and his flock was at all events something worth taking notice of. It would be a good thing, I thought, for myself, as well as for my people, if such questions about passages in my sermons were put to me when I visited them. I almost

envied Mr. Moor, though I regretted his erroneous opinions; for, to tell the truth, I never heard of any member of my flock talking in that way about my sermon. The discussion which ensued, though it led to no settlement at that moment, yet had this advantage, that it caused the friends to think, to utter their opinions, to examine and to test the grounds of their faith, and to take home many a useful suggestion.

But a stop was put to the discussion by the entrance of the Rev. Mr. Willems, the orthodox minister. Mr. Van Kolen had invited him too, supposing that it would please Mr. and Mrs. Van der Kemp. Nor was Mr. Willems a stranger to Mr. Van Kolen's house. Though the latter, as I have said, belonged to the liberal party, yet he was far from being an enemy to orthodoxy. Mr. Willems, who appeared to be past fifty, was a rather grave-looking man, whose honest, open face, however, inspired confidence. He, too, had something stately about his mien, which seemed to throw a slight shade of reserve over the rest of the company. At all events, after his appearance amongst us the conversation lost a good deal of its easy, familiar tone, and got into a strain still kind and polite, but rather stiff. England again became the topic; and I had to answer a great many questions from Mr. Willems, who seemed to take a lively interest in our home and foreign missions and our various religious societies. This turn in the conversation, however, was not exactly what I wished. I wanted to learn something more about the condition of the Dutch Church; and since two ministers representing two different parties happened now to be together, I thought I would probably have a good opportunity of obtaining some authentic information concerning the relation in which the parties stood to each other. So I tried several times to turn the conversation from England back to Holland. My efforts proved in vain, however. Every one seemed bent upon avoiding all topics relating to religion or Church matters, and our talk became very much like that generally carried on in a railway carriage.

Having returned home, I expressed to Mrs. Van der Kemp my feeling of disappointment.

"Ay," she said, "you see it would not do to turn the room into a cock-pit for the two champions. We never speak of religious matters when two ministers are together. Nor would the reverend gentlemen have allowed themselves to be drawn into any discussion of the kind. Every nerve is

strained to keep the three ministers on good terms — at least, before the eye of the public — for an open war would be an awkward thing, since they are compelled very often to meet as members of the consistory and at various ecclesiastical committees."

"But suppose your 'modern' minister had made his appearance amongst us," I asked, "what would have been the consequence?"

"He would have been politely received by his colleagues, and the company would have continued its commonplace talk upon indifferent matters. Only, most probably, you would have soon seen Mr. Willems look at his watch, and take his leave, saying that he had other engagements, and Mr. Moor would, perhaps, have followed his example. It is seldom that the ministers meet except when necessity compels them. Indeed, I wondered very much how Mr. Van Kolen could have thought of such a thing as bringing the two together. To-morrow we shall have a few friends at our house to tea, and Mr. Willems will be one of the party. You will then make his acquaintance, and find him a sound Christian and a well-instructed theologian. I have no doubt we shall spend a very agreeable evening in useful and edifying intercourse about religious matters. But I have not invited either of the other ministers. It would altogether spoil the evening."

Next night I found Mr. Van der Kemp's expectation as to the character of the meeting fully realized. Mr. Willems appeared quite a different man from what he had done the day before. He seemed to feel quite at home, spoke in an easy, familiar tone, and cheered the company as much by his wit as he edified it by his theology. Nor was a little bit of friendly controversy wanting, as some of the party expressed opinions about the extent of the atoning power of Christ's death, which seemed, in Mr. Willems's judgment, to be too narrow. Bibles were produced, and texts turned up, and the question about particular or universal redemption was fully gone into. It was, indeed, a very interesting and lively discussion, in which most of the members of the company took part.

Every day Mr. Van der Kemp and myself took a walk through the town. One day we visited an orphan-house which belonged to the Reformed Church, in which about fifty children of both sexes were supported and trained. The Church also possesses an asylum for aged men and women. Both institutions made a most favorable

impression upon my mind, being remarkably clean, comfortable in appearance, and orderly throughout.

"Do the children in this orphanage receive religious instruction?" I asked.

"According to the regulations of our Church," Mr. Van der Kemp answered, "the youngest minister has to teach them one hour every week."

"Your modern minister has at present that charge, if I am not mistaken?"

"He has, and there is the mischief, you see. Of course he teaches those poor children not to believe in Jesus as the Son of God, and nobody can prevent him. But happily the house-father and his wife are good orthodox people, and administer an antidote in their morning and evening services, and their daily intercourse with the children."

"But contradictory teaching like that must have a very pernicious effect on the children's minds," I observed.

"Of course it has, and it is to be feared that a collision will ere long take place between the house-father and Dr. Lakerman; for the house-father is rather hot-tempered, and in his indignation at the Doctor's teaching he sometimes allows himself to speak very disparagingly about it in the presence of the children. One day he even told them plainly that the Doctor taught them blasphemous lies."

"Well, I suspect he said nothing but what was true," I observed.

"I agree with you," Mr. Van der Kemp answered; "but perhaps it was not judicious to express that truth to the children. It was reported to Dr. Lakerman, whose party, you must know, is very strong among the directors of the orphan-house. I am afraid the poor house-father will be turned out some day."

"And so you will allow a good man to suffer for the truth!" I exclaimed.

"Well, nobody amongst us has power to prevent it. But, of course, we shall not by any means allow him to starve. We will manage to procure some other employment for him."

"And meanwhile you will allow the children to continue to swallow the poison?" I asked, in an indignant tone.

Mr. Van der Kemp shrugged his shoulders.

"We cannot help it," he answered in a sad voice. "But I will show you that we are not deficient in trying to provide the children of our Church with good spiritual food."

He took me to a building in a back

street, which looked like a school-house. And such indeed it was, for it contained a spacious schoolroom and a few other apartments.

"This building," said Mr. Van der Kemp, "is the property of the orthodox party. The Church has no control over it whatever, as it has been built by voluntary subscriptions, and placed under the control of a society formed for the purpose. Here we have a day school for about 200 children, and Sunday schools for more than double that number. Mr. Willems is the president of the society, and visits our schools regularly. Mr. Moor also comes occasionally; and though he is not a member, yet he gives us an annual subscription. But Dr. Lakerman, of course, never makes his appearance. We also hold public Scripture-reading meetings at this place once or twice a week. They are conducted by our 'evangelist,' a good and able young man, whom the society has engaged for visiting the poor, distributing tracts, &c."

"Do your ministers visit the poor?" I asked.

"They do, each in his own district. The town is divided into three districts, and each minister has his own. Mr. Willems being the oldest has the most respectable of the three. Dr. Lakerman again has the outskirts of the town. It goes by succession. If Mr. Willems should die or remove to another town, Mr. Moor will take his district, and Dr. Lakerman that of Mr. Moor; so that it is quite possible Dr. Lakerman may some day get the respectable class. The ministers are also bound to catechise the children of their respective districts; so that not only the children of the orphanage but those of the poor district are entirely given up to the teaching of that infidel. And he is, indeed, a very active, energetic man. He not only devotes ten hours a week to catechising the children, but he also delivers lectures on history, philosophy, and literature, which are largely attended by the well-educated class."

The more my friends told me of their Church, the more it became clear to me that the condition in which it was was utterly absurd and pernicious. I had many serious conversations with Mr. Van der Kemp about the responsibility which he and his party took upon themselves by thus passively submitting to a disorderly state of things, which could not but be a disgrace to Christ, and end in the spiritual ruin of the large majority of the people. I said to him, that in my opinion it was quite inconceivable how any good could come out of

thus deliberately dividing the Church and the people into three different sections. It appeared to me that a Christian who is conscious of his duty towards his Lord and Master, would rather allow himself to be turned out and deprived of everything than have aught to do with such a barefaced alliance between Christ and Belial. Mr. Van der Kemp answered that he could quite understand how an Englishman, in whose country such a state of things was quite unknown, would pronounce such a judgment as I had pronounced. Indeed, he told me that, moved by that same spirit, some fifty thousand members of the Church had left the Establishment sixty years ago, notwithstanding that the Government, which was then more autocratic than it is now, tried to scare them back by heavy persecutions. They formed a separatist church founded upon the old creed and church regulations, and in the beginning of their existence had to struggle hard, as very few of the clergy or of the well-to-do class joined the movement. They are, however, making much progress in the present day, owing to the increasingly absurd condition of the Church, and the fact that the law of the country protects dissenters from persecution. Still Mr. Van der Kemp and the orthodox party at large cannot resolve to join them yet. Though he could not tell how the present difficulty would be satisfactorily removed, yet he could not help entertaining some hope that the Lord would in some way or other bring about a reformation. As to my observation that I would rather allow myself to be turned out than continue in such an anomalous body, he had only to say that, for a layman at least, such a thing as being turned out had become quite out of the question. The Church was at present in such a state of anarchy that it was out of a man's power to do anything that would justify his being punished by expulsion. The only way of leaving the Church was to resign one's membership; in other words, to run away from it. But then you would run alone, for nobody would follow you, and the Church, with all its rights and properties, with its numerous channels for spreading its influence among the people, would be left in the hands of the infidels. Indeed that is just what the modern party want.

They would be quite pleased if the orthodox people would only leave the Church. In Mr. Van der Kemp's opinion, it is the duty of every Christian man to remain in the Church, and to fight for its rights till his last breath.

I think there is some logic in this.

"But," I said, after a pause, "suppose your orthodox minister, Mr. Willems, were to refuse to acknowledge Dr. Lakerman as his colleague, warn the people from his pulpit against his teaching, and urge them not to send their children to his catechisings, and send in a solemn protest to the Consistory against his being permitted to teach the children at the orphanage, what would be the consequence?"

"I believe he would be turned out by the ecclesiastical courts," Mr. Van der Kemp answered. "They would punish him as having broken the peace."

"And suppose he were turned out," I said; "would *you* and your party stick to him and follow him?"

"Well, it would depend upon the circumstances," Mr. Van der Kemp answered, after a pause. "Mr. Willems might act in an injudicious and impetuous way, you see."

"Of course he might. But, then, who would have to decide whether he had acted judiciously or not?"

Mr. Van der Kemp shrugged his shoulders again.

"I see how the matter stands now," I said. "You cannot be turned out, but your minister can. He, however, avoids pressing matters to that crisis, because he knows he cannot depend upon you. However cautiously and to the best of his knowledge he may direct his steps, he can never be sure that you will not discover some flaw or other in his conduct. So you will always have a reason to keep in, though he might be turned out."

Mr. Van der Kemp said nothing to that, but after this conversation we never spoke about the state of the Church any more. He studiously avoided it.

When leaving the town I deeply pitied the people, especially the orthodox party amongst them. Salt is good, but if the salt have lost its savour, wherewith shall it be seasoned?

From Temple Bar.

FROM VANCOUVER ISLAND TO THE MOUND PRAIRIES.

In Vancouver Island, June is to my mind by far the most enjoyable month of the twelve; the miserable sloppy transition state, filling the gap, as it were, betwixt winter and summer, has gone, and in its place we have clear sky, bright sunshine, dry ground, and gay flowers, whilst everywhere one's ears are greeted with the hum and buzz of insects and the cheery songs of birds. Soon after daylight on one of these lovely summer mornings, now some four years ago, I was on board a small steamer, named the Otter, belonging to the Honourable Hudson's Bay Company.

It is not a long and perilous voyage we are going to undertake, but simply a pleasure-trip across the Straits of Georgia, first to reach the entrance to Puget Sound, and thence to steam up this singular inland canal, in order to land at Nisqually, a large district of country so named by the Indians, and at this time in the occupation of and farmed by the Puget Sound Company.

Victoria Harbour—round which is built the town of Victoria, the capital of Vancouver Island—is by no means an easy place for a vessel of large tonnage to enter, but when once she has been steered safely past the rocks intersecting its entrance, the harbour is far from objectionable. Bad as getting into it is, getting out again is ten times worse. The passage is shoal, and intricate as a labyrinth; and should the wind blow from S.E. or S.W., the sea comes tumbling in as if seeking safety in the rock-bound harbour from the rough usage of old Eolus outside. It is true there are buoys to mark the way between the rocks, which run out beneath the sea from Ogden Point on the one side, to McLaughlin on the other, still, for all this, the navigation is not easy, even to the experienced.

In the absence of all the bustle and confusion which usually precede the departure of a steamer from a pier, it seemed to me that everything was uncomfortably quiet on this particular June morning. But few sounds were audible; the drowsy town was, at so early an hour, hushed in sleep; the water, smooth as polished metal, scarcely murmured its ripple song, as gently flowing over the beach it trickled lazily back again betwixt the shining pebbles. A small flock of "herring gulls" floating near us did not even quarrel on this occasion,—a most unusual event when there are more than two together,—but drifted by, silent as all about them. The few blinking, red-eyed savages, who had crept like animals from out their lairs to witness our departure, appeared too lethargic to move even the muscles of their tongues, as they noiselessly squatted themselves upon their heels on the overhanging bank amidst the green herbage.

Perhaps this excessive quietness was the rea-

son why the captain's voice sounded to me so like that of a Stentor's, as "Larboard," "Starboard," "Half-speed," "Go-ahead," mingled with a torrent of incomprehensible orders to the "deck hands" in "Chinook jargon," appeared to my unsailorlike ears as if the confusion of Babel was concentrated in this sea-captain's nautical vocabulary. What was confusion to me was clear enough to others, for the Otter twisted her away through the crooked passage with such ease and certainty, that I found we were "screwing" along at full speed before I well knew we had got clear of the pier. There are very few prettier scenes than is the one suddenly revealed as we leave Victoria Harbour to cross the Gulf of Georgia. To my left, the coast-line of Vancouver Island vividly recalls many familiar spots on our British coasts; its bold rocky sea-line is cut into numerous bays and creeks; above the cliffs, which are far from lofty, grassy lawn-like patches of open ground slope gently towards the timber which crowns to their very summits the rounded metamorphic hills, so strangely different from those of the mainland, which we can see in the distance, towering apparently into the very sky; their summits, white with perpetual snow, appear more like fleecy clouds than the craggy outlines of stupendous mountains. Mount Baker, one of the most conspicuous of the group, has (so say the Indians) been seen to throw out smoke from its lofty summits by men still alive. To my right, the Straits of Juan de Juca resemble a vast canal, shut in on either side by an impenetrable mat of dark-green foliage. Straight ahead, a mere speck in the hazy distance, I can make out the famed San Juan Island.

For a wonder, the sea was quite smooth, and it was amusing to watch the velvet surf-ducks (*Pelionetta perspicillata*), in flocks of four and five, sitting on the water, and looking wonderingly at the vessel, until one imagined they must be struck down by the ship's cut water; not so, however: they just pop under at the right moment, to re-appear in the ripple at the stern, fluttering their wings, and uttering their cry, as if the performance was altogether an excellent joke. Save the spouting of a distant whale or two, or the little bands of black fish that roll on, on and on, through the blue water, without any other apparent object than that of exhibiting their india-rubber-like backs, there was nothing of any particular interest to while the time away. The countless islands we threaded our way amidst were all pretty much alike, and, except that they differed in size and shape from each other, one might have supposed, without drawing largely upon his imagination, that the whole group had been chopped off one by one from the mainland; Vancouver Island being the outer slice, was cut off in a junk, in order to get rid of the ragged inequalities of the coast-line. As we round a sandy point towards sundown, the captain points out—a little village I should call it; at any rate, I cannot count more than twenty small log and frame houses, picturesquely situated in a sheltered

nook, overlooking a wide lake-like expanse of water. This place, I am further informed, is "a city," named Port Townsend, and that the wide tract of water is the entrance to Puget Sound. The Otter's head bears straight for a rickety old pier, which runs out about fifty or more feet into the sea, but so covered are its supports with barnacles, mussels, green tangleweed, together with hosts of curious molluscs, up to the tide-line (which tide, by the way, is at this present time at its lowest), that I can hardly divest myself of the idea this pier must have been lifted up in all its entirety from out old Neptune's realms. Climbing the steps was a service of danger I did not accomplish very creditably; in my zeal to capture a chiton I had not seen before, I reached a little too far over the edge of the narrow ladder by which the ascent had to be made from the boat—it being, as I have said, low-water—to the top of the pier leading to the "city," both feet suddenly slipped on the green seaweed; I clutched a bunch of mussels, but their beards snapped like thread, down I slid, over the ladder, towards the water, into which I went souse; the boat, perhaps fortunately for me, having been pulled away for the ship. This would not have been so bad a mishap if the damage had been entirely of a personal nature; as ill-fate would have it, two Indians, "deck hands," were following me, and as I spread my legs over the edge of the ladder, a system I was wont to adopt in early life when practising perilous descents on the stair-rail, of course my Indian friends were swept off the treacherous sea-stairs, as spiders are scattered by a housemaid's broom. I could swim well, so was not much frightened, but ere either of us could reach the ladder, the boat had been turned, and was close upon us; spite of all my shouts to be let alone, the would-be humane boatman made savage plunges at me with his boat-hook, which were just as likely to split my skull as fish me out—the latter was, however, my fate; the hook fixed in my coat, I was dragged into the boat *volens volens*, shaken violently, turned upside down, and, when reinstated on my legs, very nearly choked by having strong rum poured down my throat, and all this without being allowed a moment's chance to utter a single remonstrance, or doing so to be entirely disregarded. The savages, deemed of no value, got off safely, apart from the wetting and fright. Now all this arose from a wish to gratify my curiosity to visit the city, added to a greedy desire to capture a new species of mollusc.

I rowed to the Otter, changed my clothes, and made a second attempt to scale the ladder, and this time very successfully. The captain was awaiting my arrival, and, having regaled himself with a hearty laugh at my misfortune, we adjourned to the residence of the United States official, whose duty it was to sign the requisite papers, connected with the customs. The office of this magnate was a small dingy room, its only furniture two rocking-chairs, a square table, a six-shooter suspended from the

wall, a high china spittoon, and the "Customs" representative, who occupied one of the rocking-chairs. I include the inmate amongst the furniture, because he gave me the idea of being a part of it; for, in addition to the chair he sat on, his right leg dangled over the arm of the second chair, whilst the other reposed on the table; a plug of tobacco, like a small plank, filled his left hand, and, judging from the semi-circular spaces visible in its ends and sides, it was pretty evident Seth Naylor—such, I found, was the officer's name—made good use of his incisor teeth; and, as he rolled round the mass of tobacco thus bitten off from cheek to cheek, anon squirting out a rivulet of brown fluid, I could not help thinking that the Rodent and Ruminant were closely allied in Seth's organization. The process of signing completed, we left the office and its occupant pretty nearly in the same position as we found him. There was but little worth noticing in the city except gaudy bar-rooms, billiard and barbers' saloons, dry-goods stores, and half-naked savages, who were everywhere crouched in corners, or at the entrances to the stores and bar-rooms. One particularly distinguished individual, who, I am told, calls himself the Chief of the Challums, and is perhaps the only representative of the aristocracy in Port Townsend, bears the distinguished title of "The Duke of York." The peer was decidedly intoxicated—right royally drunk, in plainer English; but, far gone as he was, still he discerned I was a stranger and a "King George man." Staggering towards me, the "duke" held out his filthy hand in order to grasp mine, at the same time saying, as best he could, between the hiccoughs, "Patleth-lum, patleth-lum" (Give rum, give rum). I felt more inclined to give the disgusting beast a kick. If there is one type of mankind more degraded than another, it is a drunk-n savage.

The tide was rapidly rising, and the captain anxious to start, so I had no further time allowed me to investigate the "lions" of this diminutive city.

Puget Sound, up which we steamed in the morning—having made fast the Otter during the night to a tree, much in the same fashion as adopted in tethering a horse—is, I should say, unlike any other natural tidal canal in the known world; its length, from its commencement in the Straits of Juan de Juca to its end at the town of Olympia, is, in round numbers, two hundred miles, but of varying width; and although numerous streams, fed by the mountain snow empty into it—I may name, as examples, the Nisqually, Dwanish, Snohomish, and Puyallup—all these streams are rapid, intensely cold, and short of extent—yet the waters of Puget Sound are nearly as briny salt at the head of it as they are at its junction with the sea.

We shape our course betwixt beautiful islands, now winding through narrow crooked passages, wherein we brush the rich green foliage of the pines as we puff beneath their pleasant shade, and so frighten the grebes, ducks,

and glossy green cormorants busy earning their breakfasts, that they scarcely know where to fly, and in their terror often strike the vessel, and fall stunned into the water. Out again from these snug retreats, to coast along past immense sand-spits, in which are numerous shallow bays, the most perfect little nurseries imaginable for the baby-salmonidae, wherein to gain strength to battle with the world of water, into which they will sooner or later make their way; on some of these sand-flats, which are covered by the tide at high water, I notice long lines of tiny hurdles as if for folding liliputian flocks of sheep, but I find the sheep enfolded within these strange inclosures are herrings; when the "run" is at its full, the fish come up with the tide in veritable legions, and passing through small openings, purposely formed to beguile and entrap them, are left by the receding water in tons upon the sand. Thus easily the wily savage reaps his harvest of glittering fishes. Not only as "fish-farms" do the Indians use these sand-spits, but they are to them also game preserves; they waste no powder or shot, but wisely watch the habits of the wild-fowl, and ingeniously turn the knowledge so obtained to their own advantage. Numbers of ducks of different species quit the bays, harbours, and inland waters at twilight, to go seaward for the night, returning again at "sun-up" to their favourite feeding-grounds. The "south-southerly" duck, as it is called by the fur-traders (*Harelda glacialis*), usually gives the signal, by uttering its peculiar cry, which has been construed into the words "south-outherly" often and rapidly repeated, then up gets flock after flock of whistle-wings, bald-pates, butter-bills, stock-ducks, and a host besides, and in wedge-shaped masses wing their way close to the water, eager to reach the open sea. Here and there these sand-spits run out into long narrow points, which the ducks cross in their flight, and at these places it is the savage intercepts them. The long stiff poles I can see on the point, as we pass along, are for the purpose of supporting the nets, which are stretched like telegraph wires from one pole to another; tiny lairs constructed of brushwood and sanded over, to deceive the wild-fowl, are just discernible near the foot of each pole. Every one of these cells conceals a savage, who creeps in just before the "birds fly," and awaits their coming like a crafty spider; whiz the unsuspecting flock of ducks comes against the net, some are knocked down to be instantly seized by the human spider and summarily despatched, others get entangled in the nets, and are thus easily caught, and very many make their escape. Now we glide along beneath high rocky bluffs, overshadowed on every side by massive pine-trees. The Douglas pine (*Abies Douglasii*), the yellow fir (*A. grandis*), and the Oregon cedar (*Thuja gigantea*), alike conspicuous for their immense size and altitude, look proudly down upon the green and tangled underbrush, which, like an impenetrable brake, fills the spaces betwixt them. In the crevices

of the sandy rock, sand-martins (*Hirundo riparia*) were busy excavating, building, and otherwise attending to their domestic duties. On the loftiest pinnacles the bald-headed eagle (*Haliaeetus leucocephalus*) might be seen enthroned, spreading its powerful wings, and with half-closed eyes, enjoying the warm rays of the morning sun; whilst lower down, perched upon the splintered ledges, the American osprey (*Pandion carolinensis*) and the belt kingfisher (*Alcedo alcyon*) are watching warily for a chance to pounce upon some passing fish. Now and then we pass by an Indian village, placed on the bank of some clear stream, the fire "caneim"* or steamer adding much to the terror of the dingy little urchins playing on the greensward; like frightened rabbits, when a fox or a keeper suddenly appears in the warren, away they scamper, and, like rabbits, too, dash head first into the conical lodges dotted picturesquely about beneath the shadows of the trees. The men are fishing, and we get several fine salmon in the way of barter, which are handed up the steamer's side from out the frail canoes of the Redmen. These salmon (*Salmo quinnat*) are taken by trolling, the line being made fast to the paddle is jerked in the act of propelling the canoe, and the slightest tug is readily felt by the paddler.

We reach our disembarking place, some few miles above the regular pier, landing at Steilacome a small town built for the supply of the United States garrison. My destination — the Puget Sound Company's trading-post — is about two miles from the landing. I climb a very stiff ascent to reach the more level timbered land, and somewhat out of breath seat myself on a log, to have a good look round. On every side, the scenery — massive and noble — suggested the idea that it was planned on a scale three times the dimensions of anything I had ever seen before. At every bend of the singular tidal canal, as I looked down upon its glassy surface, varying scenes of the wildest beauty burst into view. The dense gloomy forest, clothing the mountain sides from the water to the snow-line, seemed alone monotonous, from presenting an unbroken surface of green; and it was quite a relief to see eagles and vultures soaring lazily in the lurid air, and to watch the water-fowl flapping along close to the water, quacking angrily at being disturbed in their siesta by the tiny fleet of canoes just discernible, gliding silently along beneath the shadows of the overhanging trees. Yet with all this magnificence fronting me, behind, as I commence my journey to the trading-post, there is no lack of scenes more home-like in their aspect; a gravelly road winds along through lawn-like prairies dotted with graceful clumps of the Pitch pine (*Pinus ponderosa*), the only place west of the cascades I ever saw this splendid pine growing; groves of oak (*Quercus garryana*) that would have made a Druid, however ancient, youthful in

* Fire "caneim," or canoe, is the Indian name for a steam-vessel.

heart, if not in years, to wander beneath their leafy shelter, stretched away to the right hand and to the left, in lines so regular that one could hardly help thinking that the work of man must have been concerned in planting them. Beautiful lakes of fresh water, glittering in the sunlight like tiny seas of mercury, looked as if they had been purposely excavated for ornamental purposes, an idea rendered the more impressive by the flocks of sheep and herds of domestic cattle browsing peaceably round their grassy margins. Everything about was so suggestive of a fine old English farm, that it was really very hard to resist the illusion that I had not fallen suddenly upon a civilized land, cultivated by man for hundreds of years, and adorned by touches of his highest art. Quite lost in contemplation of the homelike scene I had so unexpectedly come upon, I did not observe the approach of the chief trader, Dr. —, whose name I need not give, but of whom I may be permitted to say, that a kinder friend, more hospitable host, or pleasanter companion, it would be difficult, if not impossible, to find. We need not linger round the "trading-post;" there is little worthy of observation, either scenic or architectural, to detain us: our mission is to the Mound Prairies; to visit which, I start with the Doctor as guide, a few days after my arrival. The journey will occupy four days, two to reach the prairie and two to return again to the "trading-post." Mounted on sturdy mustangs, we jog along through such a park-like country that I can hardly believe the Doctor when he tells me nothing has ever been done to improve it. It may be of interest *en passant* to glance very briefly at the general character of the prairies common in North-western America.

The lower level prairies are tide-lands, very analogous to the saline meadows so common on the eastern coast. The salt water overflows them only at its highest periods, which may happen three, or perhaps four, times in a year. If, however, this overflow is prevented by artificial embankment, these lands are rich and fertile beyond description. Their natural herbage is a tall, succulent grass, which grows four and five feet in height; but when cleared of the grass I have seen splendid potatoes and other vegetables grown upon these tidal prairies. On the Fraser, near its mouth, capital examples of these tide-lands may be seen from the steamer by the passenger *en route* to New Westminster; examples are also to be met with at the mouth of the Nainimo River, round Shoalwater Bay, on the banks of the Columbia, and in Puget Sound. Higher up the courses of the principal rivers — I may instance the Columbia, at Fort Vancouver, as one case, and the Sumass Prairies, on the Fraser, as another — are examples of lands lying below the level of the summer inundation, which are entirely covered with snow-water from June to August. Here embankment is of no avail, but so fertile is the ground that crops put in after the subsidence of the floods are found to flourish quite as well as

if tilled earlier. I rowed over the Sumass Prairies in a whale-boat in June, when, with the exception of a high ridge peeping up here and there, and the cotton-wood trees, flooded to their branches, appearing as though they grew from out of the water, not a sign of land or vegetation was visible. In August following, I measured the stalks of some grass, picked on the prairie after the water had gone, and found the grass had grown to a length of six feet three inches; in seven weeks, all the Cyperaceæ grow with the same wild profusion, after the summer inundation. I placed a very lean ox on this prairie (belonging to her Majesty's commission) after the waters subsided, and had it killed at Christmas, when it weighed eleven hundred pounds, and was so fat that the men grumbled to eat it. I merely mention this in proof of the nutritious qualities of the herbage. Still higher up the rivers, frequently occurring among the craggy summits of the Cascades and Rocky Mountains, one constantly comes upon small openings, misnamed "wet prairies," clad thickly with Gramineæ, Cyperaceæ, and Equisetaceæ, all of the most luxuriant growth. By far the most interesting kind of prairies are those which are designated "dry prairies," which are clearly alluvial river deposits, although most of them are raised over one hundred feet above the present water-level, and are covered in many cases with a rich black loam, three feet and over in depth, the result of vegetable decomposition. These fertile patches of land produce all the plants adapted to the climate in startling profusion. The Nisqually Plains, over a portion of which we are jogging along, in extent measure thirty square miles. The Nisqually River — we shall cross it soon — may be considered in some degree the southern boundary, whilst the Puyallup River washes the northern border. Conspicuous from their extreme singularity are the "shingle terraces," rising successively from fifteen to fifty feet high, and taking a course, as a rule, parallel to that of the mountain ranges. This terrace formation is common both on the east and west sides of the Rocky Mountains. Near the Rocky Mountain House, Dr. Hector speaks of a valley excavated in the cretaceous strata by the eroding influence of the North Saskatchewan River. "In this valley there are three 'terraces,' extensively developed at twenty, sixty, and one hundred and ten feet above water-level." * The terraces appear to be confined to valleys, through which flow large streams, until arriving near the mountains. "Then they gradually spread out, and at last cover the whole country along the base of the mountains, filling up the hollows and valleys of the outer ranges to the depth of several hundred feet." At Cypress Hills, east of the Rocky Mountains, these "shingle beds" were observed at an altitude of three thousand eight hundred feet above the sea. This is, however, an older formation than the river terraces. I observed similar "terraces" to those

* Palliser's Expl.

on the Nisqually Plains at Nevada, on the western slope of the Sierra Nevada, at an altitude of more than three thousand feet above the sea, and from two hundred to three hundred feet in thickness. It was curious to see the gold-seekers washing these great cliffs of shingle away by the "hydraulic method" of "washing for gold." In pursuit of the hidden treasure, the sharpest eye, if assisted even by a powerful lens, is powerless to discover it, so minute are the particles scattered through this mountain of fragments, broken from adjacent and far-away rocks; the miner simply does rapidly, by delivering jets of water, under high pressure, directly against the cliff from metal nozzles, as used in our fire-engines, what frost, rain, and snow have been carrying on slowly, though surely, for ages: the latter three transport the produce of their erosive labour down the streams, to be whirled eventually by the eddying water into some hole, crack, or rocky receptacle, to be there left for man to discover, collected, and hoarded, so to speak, in a bank of deposit of the Creator's own contriving. The gold-washer, on the other hand, does his work rapidly; the result of minutes may represent centuries when compared with the destruction carried on by natural agencies. He could not afford to wait until the materials washed out settled again in obedience to their respective specific gravities; but to avoid this, the washer constructs miles of wooden troughs, or "flumes," through which pours a swift stream of water, carrying along with it all the shingle syringed down by the nozzles. At short distances from each other, extending along the entire length of the "flume," "police" are stationed, or, in other words, there are small deposits of mercury, called riffles, whose duty it is to seize upon all the golden fugitives, be they large or diminutive, and to hold them prisoners until fire eventually volatilizes the gaoler and sets the captive free, for man to fashion and use as he deems best.

On the great Columbian Desert—on the Spokan Plain, and along the bases of the Galtoun Mountains, past which the Kootanie River finds its way through the Tobacco Plains—on Vancouver Island, at Nianimo, and again in the "Flathead" country on the western slopes of the Rocky Mountains, where the "Flathead" Indians rear their immense herds of horses—similar terraces, shingly plains, and dry prairies prevail.

I ride up on some of these terraces we are passing along by; the surface is quite clear of timber, but clothed with "bunch grass," a festuca remarkable for growing in tufts or bunches, differing entirely from the famed "buffalo grass" found on the plains east of the Rocky Mountains, which is a choudroxium. No underbrush is to be seen anywhere, and there is not a single obstacle to impede one from galloping just where his fancy leads him, save the gulleys, cut by tiny streams through these terraces, which necessitate a scramble down and a climb up the opposite side.

As to the age of the terrace formation, I should hesitate to offer an opinion. The terraces placed the greater distance from the coast, and on the higher elevations, are, in all probability, of a greater antiquity than are these we are traversing; and marked alterations must have taken place in the re-arrangement of the materials composing them whilst the continent was being gradually upheaved. Dr. Hector, with whom I travelled through California, thinks—and I am quite disposed to agree with him, although I do not set myself up as a profound thinker on matters geological—that "the shores of the intricate channels and inlets of the Pacific coast of British North-western America, if elevated from the sea, would present but a slight difference from the sides of the narrow valleys in the Rocky Mountains, at an altitude of three thousand five hundred feet." It is very difficult to say whether the continent has been, in later times, depressed in the mass, or whether upheaval has been greater in the centre than along its margins. The latter theory, for many reasons space forbids my naming, appears to be the more reasonable supposition.

Another thing puzzles me as I ride along. Lakes, large and small, are everywhere visible on these plains, having no apparent inlet or outlet for their contents; and yet the water, as I drink it, is cold, fresh, and pure, as if from a bubbling spring. The shingle, washed clean like that on a sea-beach, round their margins, indicates a rise and fall in the water, yet the Doctor tells me few, if any, of the lakes are ever known to dry up, and further, that they never grow muddy or become stagnant. One can hardly reconcile the belief in a subterranean supply, and yet it appears very difficult to account for their purity and permanence on these shingle deposits in any other way. Encircling all their pools, are splendid growths of cottonwood, maple, and oak.

As the eye wanders over this immense park-like-looking tract, the surface appears broken by numerous small rounded hills, all covered alike with "bunch grass," reminding one of the "islands," so called, on the Texan prairies; now and then clumps of fir-trees (*A. grandis*) grow on these mounds: their graceful branches touch the ground, then the trees taper gradually to a sharp point, an appearance suggesting green sugar-loaves. Backing up the entire scene, though forty miles away, Mount Rainer stands massive and majestic. It seems to me, as I gaze on its glittering white mantle of perpetual snow, that I could stretch out my hand and touch it—and yet I know it is so very distant—it has no apparent summit (I do not know the altitude), vanishing in misty cloud, sky and mountain seem blended together into impenetrable obscurity.

I did not observe many mammals, but the feathered community was extensively represented, particularly the flycatchers and their allies, a fact easily accounted for when viewing the varied species of flowers everywhere decking

the grassy undulations, and the swarms of insects attracted by their fragrance and nectar. It is singular that the badger (*Taxidea Americana*) and the coyote (*Canis latrans*) should be unknown west of the cascades, and yet both are found abundantly by only crossing the watershed.

We stop to bait the mustangs at Olympia "city," a small collection of wooden houses situated at the head of Puget Sound, a place not remarkable for anything in particular except stores, billiard-saloons, barbers' poles, a post-office, and groups of idlers sitting in the shade "whistling," chewing, and contemplating their toes, which, as a rule, were elevated far above the level of their heads. A pleasant ride through very much the same character of country brings us, near sundown, to a small log shanty close by a stream. The Doctor being known to the owner, we were soon accommodated with supper and a shake-down for the night.

As we are "saddling-up" to start, the most terrible shouts and yells I ever heard came pealing down the valley. The settler, seizing his rifle, rushes up the course of the river, and we, as soon as we can manage to secure the mustangs, start in pursuit. The shouting continues, and, as the voice evidences intense terror, we think Indians have seized upon somebody, whom they are roughly handling, an idea confirmed by hearing the crack of the rifle. The shouting has ceased, and it is with no little difficulty that we are enabled to discover the whereabouts of the settler and the frightened individual who had called so lustily for help. We come suddenly upon them, more by good luck than good management. The cause of all the fuss turned out to be a large puma (*Felis concolor*). It lay, dead and bloody, near a bullock, which it had dragged down and killed. The strength of the beast must have been prodigious, for the steer weighed (so said its owner) five and a half hundred-weight. The puma had evidently fastened on the back of the bullock's neck, and killed it by biting through the cervical vertebra, betwixt the atlas and dentata. Whilst the puma was quietly gorging itself, a farm-labourer, by birth a German, happened to pass near it. His dog, making a yapping noise, induced the German to see what it meant, when, to his astonishment he came plump upon the panther, or "painter," so called by the settlers. Of course the beast showed symptoms of anger at being thus disturbed, by exhibiting its teeth, growling, and lashing its sides with its tail; further than this, the animal had done nothing more than stand defiantly by its prize.

The German, afraid to run, had seized a rail from off the fence, against which he had backed, and placed himself in an attitude of defence, trusting to Providence and his throat to do all the rest. His rescue was easily completed by the settler's rifle. Pumas are very destructive to the flocks of sheep kept by the Puget Sound Company. I must not linger longer on the

way — though numerous objects come under my view, as we ride along, well worthy of being described.

We push through a kind of gap in the timber, which is thicker here than I have seen it anywhere along our route; and imagine, if you can, a level surface, extending as far as eye can follow it, so thickly covered with conical mounds, from five to eight feet in height and from four to six feet in diameter at their bases, that it was almost impossible to walk about amidst them. I can find no comparison which will bring this wondrous place familiarly before the reader; it was like to nothing I had ever gazed on before, and I have never seen any formation, even approximately, resembling it since. I examined and measured dozens of the mounds, and several I contrived to dig open, but only to find the whole substance was shingle, kept together by a kind of calcareous concrete. All were covered with bunch grass, and on most of them a botanist might have gathered many species of flowering plants. I looked at them from a height, I scrambled about amongst them for miles, sat upon their summits, and held council with my friend the Doctor; but all my theorizing failed to satisfy me as to how these thousands upon thousands of mounds, more or less exactly alike, and in contact at their bases, could have been formed. There was no evidence of a current having "flowed" in a given direction in bygone ages, and so caused eddies, by which mounds might have been formed. No; it was, and is, to me still inexplicable. I saw several prairies subsequent to this visit to "the mound prairie," with small mounds sparsely scattered about over the surface — mounds too, in shape and size, very analogous to those of the "mound prairie," and it is just possible they will eventually be found to have the same origin; still it is the vast aggregation of mounds, covering miles of land, and that so thickly as to leave no room to jam in another, that bothers me. It may not be amiss, having confessed my own utter inability to form even a reasonable theory as to how the mounds were either built up or deposited, to give the opinions of other observers.

Mr. George Gibbs, who was attached to the United States Boundary Commission, and of whom I can say, from personal knowledge, that there are very few keener observers, supposes "the mounds might have been produced by the immense growth of the 'giant root' (*Megarrhiza Oregona*), forming a nucleus around which the soil has been gradually washed away."* From this opinion I must beg leave to differ in toto. I have often seen the plant growing further south, but never to produce mounds more than do trees or a stump of any kind. More than this, supposing a plant had once grown on every mound, why are they all dead? unless they killed one another for lack of room to spread, not a likely occurrence; and even then we might hope to find the plants on more open

* P. R. R. vol. i. p. 409, n.

spaces, a task that is impossible, because it does not grow anywhere near the mound prairies. Mr. Gibbs has, I find, altered his first opinion on reference to his Geological Report.* He there says, speaking of the "mounds," "their origin is clearly due to water." Dr. Cooper, United States, who reported on the botany of the Pacific Railroad survey, says, "I would suggest that there the mounds may have been produced by eddies and whirlpools, probably when Puget Sound formed the estuary of a great river like the Columbia, or perhaps were bunches of the great system of North-west Sounds, which extends from the Columbia River to Sitka."†

To this theory I am somewhat disposed to be a convert, because I have many times seen the "tide rips," as they are named, in the Gulf of Georgia and Straits of Juan de Fuca, eddy round and round with such force that H.M.S. *Satellite* has been very nearly turned about by the circling force of the whirlpool. This whirling state of water is more particularly noticeable in Johnson's Narrows, where the tides meet, which flow round the northern and southern ends of Vancouver Island. I can very clearly understand how mounds could be raised in this manner, because on the sand plains at Walla-Walla, on the Columbia, the wind does exactly the same thing with the sand, only in a lesser degree. But the numbers puzzle me still. I cannot help thinking the mounds were all made at the same time, and if so, the water must have been all whirlpools. I

could have lingered round this wonderful prairie for months without wearying, but the Doctor wants to be off home, so I am reluctantly hurried away. We did not return by the same route we came, still the country traversed was so similar that describing it would be only to repeat what I have already stated. As we skirted the timber I noticed small herds of white-tailed deer (*C. leucurus*) and mule-deer (*C. macrotis*) browsing peacefully within the shadow of the massive pines, and every now and then one's reverie was broken by the whirring noise and sharp cluc-cluc of the dusky and ruffed grouse, roused from their siestas in the flowery herbage by the trampling of the mustangs. The shore-lark, blue-bird, and western song-sparrow lent the melody of their sweet voices to cheer the open glades, assisted by the sand-hill crane, as, stalking like a feathered-wizard through the grass, it screamed discordantly a kind of refrain. Tits, nuthatches, and golden crests, were busy in the pine-trees hunting for insects, whilst further back from the recesses of the forest came the rap, rap, rap, and laugh of the log-cock, the wild shriek of Stellers jay, and the gurgling jollity of the barking-crow, which appears to be everlastingly making jokes and laughing at its own fun. It was a truly enjoyable ride, and I felt sorry when, towards the end of the fourth day, the appearance of sheep and bullocks revealed our near proximity to the "trading-post," which we reached in time for supper. This was my first, my last, my only visit to the "Mound Prairies," the remembrance of which I shall ever cherish as being the most wonderful place I ever beheld.

* Vol. I. p. 486, n.

† Nat. Hist. Washington, p. 18, n.

It is but a few years ago since the name of Semmes—one of the leaders of the Confederate Navy—was of no small importance in the political world. He and his coadjutors very nearly brought England and the United States into collision; and even now we have not got over all the difficulties which the sea-captain of the Richmond Government entailed on us. But Semmes, since the fall of the Confederacy, has beaten his sword into a steel-pen, and has betaken himself to the calm pursuits of literature. We read in the *New-York Nation*:—"Admiral Semmes has at last found a haven. After a stormy career as a pirate, and

a still stormier one as judge of probate and editor of a daily paper, he has become professor of 'moral philosophy and belles-lettres' in some college in Louisiana. The more one hears of this gentleman, the more one is astonished by his versatility. There appears to be no position in life for which he is not fitted. If he does not like his place, we have very little doubt another can be found for him in some other Southern institution of learning, as an instructor in Biblical exegesis, or the civil law, or Sanskrit, or organic chemistry, or music, or polite letter-writing; nothing will come amiss."—*London Review*.

From Temple Bar.

A FRENCH WATERING-PLACE.

VERY likely there may be others in the same difficulty with myself. I am never able to quite suit myself with a watering-place. Indeed the very name is distasteful to me. It conjures up Brighton and Hastings. Such places are pleasant enough for a day, and, for anything I know, they may be so too to live at for years; but for a month, when one has but a month, they are not to be endured. At Brighton, for instance, I can never get rid of the fancy that I am in Regent Street. Such is its artificiality that I can never quite believe in the sea there. I am possessed with the belief that Mr. Beverley or Mr. Telbin has something to do with it. It puts me in mind of the sea in *The Tempest* at Her Majesty's when Sontag was here, and of that in *A Chain of Events* at the Lyceum, and I think it is very well done; and I now and then find myself wondering where the wings are and the flies. In fact I want a watering-place that is not a watering-place. A place where a bath can be got when wanted, yet where the sea is not disfigured by dozens of bathing-machines, like huge snails, crawling out into eighteen inches of water: where one can get a boat, yet can walk upon the beach without being mobbed by a score of mariners, ancient, middle-aged, and modern: where there are no barrel-organs and no brass bands; if possible, where there are no photographs; and, but this is too much to expect, where there are no visitors. Such a place have I sought, and, excepting one place, the name of which is a secret, because I hope to go there again and do not want it spoilt, sought not only in vain, but even without finding anything at all like it. Well, failing this side of the channel, I consulted my Murray; my Murray, not one of your present year's edition, but one I have had these ten years, and felt I could rely upon. I reasoned soundly. I said, Let me find a village, not at the mouth of a river, but on the coast itself, because then the sea-water will be undiluted: a place without a harbour, because then there will be no shipping, which to the water is uncleanness, and to the bathing abomination: a place without railway communications, because then there will be fewer visitors; and where there are few visitors the rough edges of its idiosyncrasy may not be quite worn away. So reasoning, I studied the map. The situation of Etretat, about midway between Havre and Fécamp, commended itself to

me. I read what Murray said: That it was a fishing village; that it was frequented by artists for the sake of its picturesque coast and fantastic rocks. I rubbed my hands. That there was a good and cheap little inn. I said, This will do. That the road thither was bad. I said, When does the Southampton boat go?

Just a passing word for Trouville, which name facetious etymologists say means a hole of a town where the sandy shore is so flat that when the tide is out it is necessary, according to the *Journal Amusant*, to carry refreshments with you on the long journey from your bathing *cabane* to the sea; and according to the same facetious authority, where a gentleman having come to visit the sea, and finding that it is out, regrets that he cannot see it, and leaves his card for it on its return. And Fécamp, with its abbey, and its jolly old galleried inn, the *Grand Cerf*, just such as one likes to think was the Tabard on that

— "Eighte and twentie day
Of Aprile that is messagere to Maie."

And its deft, neat, kind, shrewd, clever little hostess, most French of Frenchwomen. With, on the shore, — a full mile from the old town, which is more on the river than on the sea, and from which omnibuses to the baths run frequently, and, to the inn sojourners, gratuitously, at least nominally so, — its enormous bathing *établissement*, with a dining-room that looks a quarter of a mile long, and with balls and concerts and all sorts of amusements. And for Yport, a quaint little village, where the streets are as much stairs as streets, nestled in the mouth of a narrow and lovely valley, most beautifully wooded. But, *amari aliquid*, its pleasantness is marred by a very bad shore for bathing. Here, among other things worth notice, is, on the side of a pretty and prettily-situated house, a slab, inscribed in large gold letters with *Suave mari magno*, and then space enough left for the remainder of the verses making up the sentence. Now, what sort of fellow lives here, I wonder. A retired schoolmaster, or what?

The village lies about two miles from the highway, and from one to the other there is no public conveyance. The road keeps the bottom of a narrow valley, the hills on either side covered with beautiful copses, orchards, or timber. It makes one of the best of the many charming walks the neighbourhood abounds with. And, indeed, the high road, all the way from Fécamp to Etretat, between which Yport is about midway,

is very beautiful, and a ride along it on the banquette of the diligence is most enjoyable. And when the diligence, with an extra jingle of the bells, and an extra crack of the whip, turns the corner of the road on the hill on the side of the valley above Étretat, and comes into view of the bright little town in the bottom, with on each side the lofty cliffs worn into strange shapes and semblances by the waves—the heights on the right topped with the seaman's tiny chapel, and the calm blue sea stretching its straight line across the broken curve between them—the looker-on who remembers a prettier spot remembers a very pretty spot indeed.

My poor old Murray's description of Étretat was right enough at the time, no doubt. Now the place is greatly changed, and mainly thus: Fifteen or sixteen years ago it had among its few visitors Alphonse Karr. When there he became interested in a poor family of seafaring people—a father and mother, Jean and Rose Duchemin, with sixteen children. They began life poor, and had become poorer. M. Karr happened to learn that the mother, a woman evidently of considerable natural ability, had written a sort of history of her life. The idea struck him that this narrative might perhaps be made the means of bettering their fortunes. He accordingly, perhaps not wholly without an eye to business, endeavoured to get her to show him her manuscript, which she was at first unwilling to do, on the ground of its having been written only to divert her thoughts in the long winter nights, and that it was mere nonsense to any one else. Indeed, it is scarcely possible that a woman placed as she was could have conceived the idea of her history being of any public interest. However, the novelist overcame her modesty with a couple of Napoleons, for which consideration she sold him the manuscript. He took upon himself to publish it. How much he altered, how much he added, how much cut out, how much is hers, how much his, I, of course, do not know; but the result is a simple and touching story of homely life, not unworthy of Defoe. The book was a great success. It drew attention to the place. It became the fashion to go there, and when there to visit Rose Duchemin, and buy from her a copy of her autobiography, with which she had been freely supplied by her patron. These purchases were generally liberally paid for. The Duchess of Orleans made her a munificent present; and the family rose into a comfortable position. The parents enlarged and improved their cottage, to enable them

to lodge visitors. One of the sons became part owner of one of the two sets of bathing cabins; and the sixteenth child, a daughter, set up a warm bath.

It is disagreeable to have to add that in her improved circumstances Madame Duchemin behaved very ungraciously to her benefactor. Disagreeable because it is inconceivable that there could have been the least reason for it; though it is fair to state that this opinion is based upon M. Karr's own account of the affair, which is given incidentally in one of his books: still more disagreeable it would be if one could think there really was any. It seems that when she had got rid of all the copies with which he had presented her, she wrote to him for a fresh supply, and the whole edition, the second I think, being exhausted, there was of course a delay while another was being prepared. She wrote a terrible letter, telling him that she was not a little surprised that he had not long before made her a handsome present; that not having done so, the least to be expected was that he should, without delay, supply her with fresh copies when required: still, that if he behaved well in that respect in future, she might not expose him for having got a manuscript of such merit out of her for a couple of Napoleons.

Attention once drawn to the place, its own merits did the rest. Its pleasant walks and woods, where blackberrying and nutting can be carried on with great success, its romantic rock scenery, and, above all, the perfection of the beach for bathing, are enough to place it unchallenged at the head of all its rivals on the Normandy coast. The beach in the centre of the bay, where the bathing cabins are placed, is a clean shingle without a trace of sand, even at low tide, consequently the water is as clear and bright as that of a spring, and the beach being steep, two or three strides are enough to carry one into swimming depth. Besides, there is an excellent contrivance, which I have never to my recollection seen elsewhere, except at Ilfracombe: a spring-board on wheels, pushed out or drawn up, to suit the state of the tide, enabling the bather to take, I would say, were I not afraid of being taken for an admirer of the *Colleen Bawn*, a tremendous header, but for that reason say instead, a plunge into eight or ten feet of water so clear that you may see the pebbles at the bottom. Then always hovering about, in bathing hours, at thirty or forty yards off the shore, are a couple of boats, provided with steps at the side for the swimmers to climb up and rest upon, and to repeat their

plunges from. The beach being steep, there is the further advantage, that whether the tide be in or out, the bathing is equally good, and there is not many yards' difference in the distance of the water. And in the breaking of the deep water upon the shelving bank is heard, as never can be heard on sand or rock, the mysterious music —

“The weltering of the plangent wave”

— as it drags down with it the loose stones, singing freshly their eternal song of changeless change.

Perhaps the nature of the shore may in some measure determine the nature of the visitors to it, and so it may be wrong to draw from them a general conclusion, but certainly I have never seen in England so large a proportion of bold and skilful swimmers. There was scarcely a man who was not a swimmer, and but few of the women who were not either so or trying to become so. There were several women who used to swim out to sea in a style of which no man need have been ashamed. And the dashing way in which some of the men went off the spring-board was good to see. One used to turn splendidly a clear somersault before touching the water. Some of the women, too, would jump off bravely, but generally feet foremost.

The bathing arrangements are very good. Men and women bathe together without any restriction. The women wear a complete dress consisting of loose trousers and tunic with an oilskin cap trimmed with red, which together make up a very pretty and coquettish dress. And the men, a curious garment like a pair of loose knee-breeches and a waistcoat united. Directly I saw it a light broke in upon me. In the Bayeux tapestry is a representation of some hauberk carried as trophies. They are split at the lower part into legs, and an eminent antiquary in his lucubrations upon the tapestry showed himself as much puzzled to know how their wearers could get into them as was ever King George as to how apples could be got into dumplings. I own I did not see a way out of the difficulty or into the hauberk until I saw this bathing dress; but as soon as I saw one I saw the other.

Moreover, both men and women are provided with a *peignoir* of white linen or woollen in which they march down to the water, looking like ancient Romans. They undress in the *cabanes*, little wooden huts arranged round three sides of a quadrangle, the sea being on the fourth. There is some

distance therefore to be walked over the shingle, but all difficulty in this respect is got over by wearing a sort of shoe, the uppers of coarse canvas and the sole of thick plaited hemp, which gives complete protection to the feet, and does not in the least impede swimming. When you get back to your cabin, you find ready the luxury of a foot-bath of hot sea-water. By the way, when the sun is fierce, some people wear coarse straw hats to swim in, and now and then a Sybaritic she is seen floating about with a parasol. There are, too, some half dozen flat-bottomed canoes rowed with paddles, which afford immense fun, not only in paddling about, but in being upset yourself or in upsetting others out of.

Small as Etretat is, there is great variety in it. It is a thriving busy little country town: it is a fishing village, a large open-air washing establishment, a bathing place, a country fair, a town masquerade, topped up with a dozen or so of Noah's arks. I take my stand upon the western cliff, and try to tell you what I see.

Sprinkled on the slopes of the cliffs on both sides of the town are numbers of pretty houses, each in its own little enclosure, the houses for the most part of the simple materials red and white bricks, but these employed with such taste and judgment that the result is very pleasing to the eye. On the crescent-shaped beach below, swarming round a tiny stream which they dam up with stones into a tank, is a score or so of women, busily at work washing the linen and garments of the town, or, having washed them, spreading them at large on the beach which they make look like an enormous mosaic pavement. Then comes the fishing part of the town. High up on the beach beyond the reach of the tide is a number of boats, past service, roofed over with thatch or boards, with practicable doors cut in their sides or sterns, and used chiefly as store-houses. These are the Noah's arks. About level with them is a range of clumsy but picturesque capstans, much sketched of young ladies, and used for drawing up the present generation of boats, and chiefly worked by women, the wives, daughters, or mothers of the boatmen. Touching capstans, here is a joke. Young lady is sketching. Proud mother to lounging artist:

“My daughter, you see, has quite a talent for drawing.”

“Yes, indeed, madame; that dog, now, is extremely successful.”

“But, sir, that is not a dog, it is a capstan.”

Lower down is the present generation of

boats, handy stout vessels manned by jovial sailors, stout and handy too, and which keep the beach alive, going off and coming in, often laden with mighty catches of fish which are sometimes sold off by auction then and there upon the beach. Further on comes a long booth, looking like a slice out of Greenwich fair, — presided over by a comely dame, but a terribly sharp hand at a bargain, and who is assisted by half a dozen strapping Norman lasses, — where you may buy all kinds of pretty knick-knacks for friends at home, and which is the chief depôt for the pretty white canes about four feet long, of holly, and shod with a stout steel spike, such canes as we all remember in Mr. Leech's charming "Bay of Biscay, oh!" and without one of which no lady here feels herself properly equipped, and which, indeed, are of great service in climbing up or down the steep hills and break-neck paths with which the coast abounds.

Then comes the casino, a convenient set of public rooms lightly constructed of wood, with a pleasant terrace overlooking the beach, and having a gymnasium attached to it. In front are the *cabanes*, and within the quadrangle formed by them is the gayest spot in Eretat. In England for the most part swell-people get themselves up at the seaside much as they do elsewhere, though with more license and emphasis. Here it is altogether different. Many of the men wear full suits of pure white or blue, quaintly cut, and trimmed with scarlet or some other bright colour. Then there is a good sprinkling of foreign national dresses. One day was particularly noticeable a group of Spaniards, the men sombrely magnificent in black velvet, and girded with rich and heavy scarfs of parti-coloured silk. One, the senior of the party, a gray-haired but stately and stalwart gentleman, quits his companions to step up to and salute a lady in bathing-dress, which he does by doffing his cap, and bowing lower than is the use with our countrymen, but without a trace of flourish, and with so stately yet gracious an air of deference as made one think that even so might the Cid have accosted Donna Chimena. Then the women of the party were exquisitely dressed, but in themselves so beautiful, more beautiful than one is apt to think Spanish women could be — in fact, so beautiful, that one could take but little note of anything but their faces and their microscopic hands.

As for the women generally, good luck! it is of no use to try to describe their capers. Imagine any and every variety of make of dress, and every combination of colour, and,

be your imaginings but striking and pretty, you may realize them all here. Every shade of every colour, stripes, tartans, checks, patterns large, patterns small, and no patterns at all, here they are, conjured into scores of dresses, any one of which ought to make a dressmaker's reputation forever. Then as to the hoods and hats! "That way madness lies." Why even the seasoned nerves of a Bond Street milliner could not withstand such sights without a shock of admiration. This of the women's hats, of course. Of the men's enough to say that the orthodox round or funnel hat is not to be seen here. Let me dig up the hatchet and raise my war-song against this wretched Frankish hat, fit companion for the Scotch boots only. Is there a man so hard of head who never to himself hath said, This is, by Jove, too much to stand? What a triumph of perverse ingenuity it is! Was there ever a contrivance so perfectly uniting the highest degrees of ugliness, of discomfort when on, and embarrassment to know what to do with it when off, expensiveness, easy capability of being spoilt, absence of protection for the head and of shelter for the eyes? In what other kind of hat would that not be accounted a vice which in this must be called a virtue — its only one — namely, that it is very easily blown off, thereby occasionally giving the unhappy owner a short respite. Against taste it sins as deeply as it does against comfort. Try an experiment. Place a wide-awake upon the noble head of the Olympian Jove, and what before was the semblance of a manlike god declines no lower than to become that of a godlike man. Substitute for it a chimney-pot hat, for fair play's sake let it be one of Melton's best, and regard the marble without laughter if you can. The place of trouser-straps is empty, and that of stand-up shirt-collars knoweth them not. So be it even unto thee, O Hat of my abomination!

Absurd as it seems, it is hardly too much to say that the getting rid of straps and stand-ups has done more for the health and comfort of people than the Board of Health has, not only physically, but mentally as well. Surely a man's life must be worth, without them, two or three years' more purchase at the very least.

A more wholesome feeling as to hats is growing up, but it grows slowly. A man may now, it is true, wear in London, without being mobbed, a cap, or a hat of straw or felt: of that light, soft felt, so light that it scarcely can be felt, which will wear almost for ever, and which may be doubled

up, put in a pocket, sat upon, stood upon, and then put again on the head, looking all the better for its rough usage. Yet still does that most uncomfortable of humbugs, the extremely respectable man, regard this instrument of torture, this infernal machine for the production of headache, as a sort of material Shibboleth demonstrative of respectability. Of this, here is an instance, really a fact. Only the other day, an extremely respectable and well-known London brewer stood talking in the street to another gentleman, when some one went by in a felt hat, and in passing some acknowledgment of each other was made by the two latter. Presently the second gentleman, overtaking the Hat, says, with the kindest intentions towards him, evidently feeling that his hat was placing him in a false position, "What do you think Mr. So-and-so says? He says that if you have any friends, they ought really to prevent your going about in that kind of thing, for no respectable person would do so, unless he were mad." To this the Hat: "Why, then, he doth belie his name, for that speech shows not only that he is no wit, but that he cannot be very well-bred."

Next to the casino, a few more Noah's arks, in one of which, made into two convenient enough chambers, are rigged up the warm baths of Marie Duchemin. The water is heated in the bath itself, by placing in it a portable charcoal stove, very much after the fashion of the heater in an old-fashioned tea urn. There are others more luxurious belonging to the casino. Then comes the eastern cliff, rising with a steep ascent to a mile or two of table land, and jutting out far into the sea, and worn through by the waves into a great arch. On the top is the little chapel of Notre Dame de la Garde, dilapidated and patched, but at bottom antique, where the seafaring folk make their vows and hang up their simple votive offerings. Over the altar is a happily appropriate and very good painting, representing the appearance of a Guido-like virgin and child to a boat's crew on the point of shipwreck in Etretat bay. It looks the work of a distinguished artist, but I have forgotten the name, though it is in the corner. It is the gift of the present emperor to the sailors and vessel-owners. Following the sea eastward we come almost directly to a rough zigzag path down the face of the cliff, leading to the Devil's Caldron, a wild spot. About a mile further on is a rude staircase of, it is said, two hundred and eighty steps, the greater number of which are each twelve to eighteen

inches deep, leading down to one of the prettiest places ever seen. It is called *La Fontaine de la Mousse*. A clear spring, percolating through the rock, and issuing from its face at a height of perhaps fifty feet, runs through and over a great bank of the richest, softest, and greenest moss, like that which Alexander Smith saw in Skye, richer and softer than the velvet of kings, and drips from the fringed edges like drops of liquefied light. Blandusia, hide thy head — thy fountain head! *Splendidior viro* is weak to describe thee, O Fountain of the Moss!

On the western side of the town, the rocks are even more quaint and strange. There are two pinnacles of rock called *Les Demoiselles*: a cavity known as *La Chambre des Demoiselles*: and a deep cavern on the beach, without, I believe, any distinctive name, but remarkable, as I accidentally found, for a growth of fine red moss or lichen, almost invisible in the open light, but in the side light in which it is seen by looking back from the bottom of the cave, glowing so as to give the place almost the appearance of being lit up with theatrical red fire. Then there is an enormous gap in the rock, through which you may sail at high tide or walk at low, called *La Porte*, but a better idea of its character than this name conveys may be given by comparing the outer rock to a gigantic flying buttress, which indeed it really is. The opening is, perhaps, seventy feet high. Further on is another of just the same kind, but larger; and, between the two, a tall conical rock called *L'Aiguille*. Another moss fountain, pretty, but not so large as the other. Still further on another jutting headland, pierced with a tunnel, through which, with a little scrambling, the beach on the other side may be reached and the cliff re-ascended. The rocks, bare at low-water, are very rough to walk on, it is true, but they abound with anemones and gay weeds. And the beach is, in its way, perhaps worse, but has its amusement likewise, in the number of beautiful transparent pebbles that may be found.

The town, a main street of thriving shops, and two or three by ones, runs inland, so that there are but few houses looking on to the sea. At the upper part we come upon an open space which serves a market-place, and on Sunday evenings as a meeting-place and play-ground for the young town-folks. Here they gather in great force, and far into the night play with great zest at a sort of kiss-in-the-ring, without the kissing. They join hands in a large circle, singing

the while, at the top of their voices, a chorus in which I could distinguish only the words:

"Ella a perdu son tablier." *

Here also found a place a wandering shooting establishment, something like those we see at our fairs and races; but with this characteristic difference, that with us the successful marksman must be rewarded and stimulated with a prize of nuts, but here the honour and glory of hitting the mark is enough.

Except an imitative chalet, and a sham castle, nearly as bad as Strawberry Hill, and which ought to be knocked down forthwith, the houses are much like those in French towns generally where brick is used; and whether that be used or stone, either is used in a way which it would be well to see more common in England. The leading constructive lines are indicated by the arrangement of the bricks, and generally by their being of a different colour from the bulk of the wall. Then very effective cornices and string-courses are got by ingenious arrangements of the simple bricks; and an endless variety of patterns to decorate the friezes is obtained by the use of two or more colours. Where an open screen is wanted still the bricks suffice; much better than the odious mud-pie baluster usual with us in such cases. Then, and this is greatly to be commended, a roof gutter within the parapet is a thing unknown. The great enemy Damp is carefully kept at a distance from the walls, instead of his having prepared for him to stop in a nice deep gutter which a bird's nest in the mouth of the rain-water pipe may convert into a tank. I suppose the old Norman genius for building is still in the race.

As elsewhere in France, the furnished lodging, as known to us, does not exist here. The visitor who wants his cooking

done at home must rent an entire house and hire a servant. If he do not choose to do this, he may either go to an hotel where he can board and lodge at so much a day, the board being understood as including breakfast and dinner only, so that a *marpin* like that to Sir Benjamin Backbite's sonnet must be allowed for extras; or he may take a *clambre garnie*, usually arranged to serve as a sitting-room as well as a bed-room, separate sitting-rooms, except in the case of letting a whole house, not appearing to be in demand, and where the owner does no cooking for him, nor in fact anything beyond putting the room in order once a day, and getting the boots cleaned; in which case he must either take his meals at an hotel or restaurant, either of which board by the day for a little less than the charge for each meal separately would amount to, or he may get them sent to his chamber from a neighbouring restaurant.

Clear of the town, at the foot of the hill, stands the grey old Norman and first-pointed church, a rather large building, which has suffered but little either from time or restorations. Should the reader find himself at Etretat his pains would not be ill-bestowed if he would go, after nightfall, to the church, and, pushing open the always unfastened door, look down the dim vista of the round-arched nave towards the single taper burning before the high altar.

The farms in the neighbouring country look comfortable and well-to-do, but not very neatly kept. The labouring men have a sprightly and self-reliant air, and their salute to a stranger has a touch of dignity as well as of courtesy which is pleasantly different from what is too generally the manner of their counterparts in, at any rate, some English counties. Many of them, no doubt, get their subsistence off their own patch of freehold land, and the sense of ownership has perhaps an influence on the character. I have a great mind to buy a forty-shilling freehold, and try the effect myself.

R. J. F.

* Has this a like meaning to, in Scotland, the Snood?

We read in the "Table Talk" of the *Guardian*:—"The letters and correspondence of General Ruthven, one of the most able officers in Charles I., are likely ere long to see the light. We understand that the preparation of these

letters for the press has been intrusted to Mr. Macray; and that the work will be printed for his Grace the Duke of Buccleuch, as his contribution to the Bannatyne Club."

From the Spectator, 29 Dec.

THE SECRET GOVERNMENT IN ROME.

Who does not remember the marvellous organization of that Secret National Government which, during the last Polish insurrection, defied the hundred-handed police of Russia, issuing writs, and orders, and passports, that ran through the length and breadth of the country, under the very eyes of the Czar's agents, who yet never could lay their hands upon the mysterious body which was giving such continued signs of active life? It would seem almost as if the atmospheric condition fitted to foster such formation was precisely the one which might have been thought the most directly calculated to stifle its existence, as if the unrelaxed harshness of an iron-beeled police régime, instead of withering up, only stimulated the perfect growth of so strange a creation. For the only other spot where a specimen of the same occult species has contrived to flourish is one which offers a remarkable analogy, in the all-pervading jealousy and harsh nature of its police system, to the political condition that hung over Poland. The political atmosphere of Rome has been for generations pervaded with the miasmas of espial, and inquisition, and denunciation. Secular Rome, the Rome of the Pope's temporal power, is emphatically the Land of Sbirridon, of eavesdropping pushed to the extreme of stealthy perfection, of a police not merely Argus-eyed, but which should be all over eye, for it is a police identified with a priesthood that operate through the Confessional. Yet in Rome there has been for years a National Committee which not only has never been itself detected, but which has contrived to effect so perfect an organization that not only is it in possession of every Government secret, is informed of every Government resolution as soon as adopted, but has for years carried on a clandestine press in Rome itself without its ever having been possible for the police to discover its site, or even to impede the distribution of its publications. The only difference between the Polish and the Roman clandestine governments which may be thought to have facilitated the existence of the latter is this — that in Rome conspiracy has been more latent, and, therefore, has involved a less continuous, and also a less difficult task than that which fell to the lot of those who in Warsaw directed an actual movement. No doubt there is much in this difference of degree. What has hitherto been called for in Rome is comparatively fair-weather sailing to what will

be required; but still no one acquainted with the operations of the national party during the last few years, as, for instance, on the occasion of the petition to the Emperor for the withdrawal of his troops, which was notoriously circulated for signature, and was hunted for by all the power of the police without even one of the slips with subscribed names falling into their clutches, can fail to be astonished at the organization exhibited. In no one instance have the Papal authorities succeeded in making what may be fairly considered a good haul. All recently effected in spite of perpetual perquisitions has been the occasional seizure of a few subaltern agents, the discovery of some copies of an already distributed publication, and never, that we can call to mind, has anything been really prevented, or any discovery made which seriously disconcerted the national party. By some mysterious machinery which baffles all the arts of detection, the National Committee, like a *Vehmgericht*, knows how to cause proclamations and manifestoes, and more than that, a newspaper, — which comes out, however, at no fixed period, — to be delivered as surely as the Pope's official gazette. How they are brought no one can tell, but at your door they arrive much more certainly than the post.

It is but natural that the present pregnant conjuncture should have led to sympathetic manifestations on the part of this occult body. Within the last month, Rome has been successively inundated with three publications circulated by that mysterious agency, which no one can describe, but every one encounters. Of these one is an avowed official act, bearing the name of the National Committee, while of the other, one has indeed been suspected to proceed from a source foreign in some sense to this body. Take these, however, together, and we believe we shall have a pretty accurate summary of the more or less converging streams of feeling that permeate the Liberal party in Rome at this most critical moment. The recognized document is an address to the Romans, signed by the Committee and dated the 14th of December, in which, while congratulating the population and Italy on the final emancipation of the country from foreign occupation, the clandestine government urges the people not to give way to impatience, but to await in trust the hour when it will be called to realize the fulfilment of its long pent-up aspirations. There is nothing very remarkable beyond its general tone of moderation in this appeal, which, indeed, recalls to mind the colourless

language so often apparent in the addresses of our parliamentary candidates, in their anxiety to avoid giving offence. Great is the contrast with the other document, which, though professing to be but the individual address of a Friar Giusto to the Romans, has been indorsed by the Committee, with an appended recommendation of its tenor. This latter is an address couched in language so magnificent in colouring, so forcible in expression, and embodying ideas so subtle, that it must perplex the hard British mind to believe it a broad sheet destined for popular effect. We have here the grand utterance of one who declares himself an Italian in fibre, and a man of the altar by conviction, and who, inwardly persuaded that the two are perfectly compatible, speaks to his countrymen with the eloquence of an apostle, and the peculiar accent of a mind saturated with the blended intellectual fluid of a Dante and a St. Thomas Aquinas. But who, then, is this Friar Giusto? That is a question which we cannot answer; all we feel sure of is that he is a man of a burning eloquence, and that the whole cast of his writings is stamped with the mark of a genuine ecclesiastical origin. After carefully perusing the compositions bearing his name, it is impossible to consider them counterfeit productions. They are pervaded with those touches which are beyond imitation and fabrication. It is now rather more than a year since this mysterious monk's voice was first heard in Rome. Then a pamphlet of a few sheets issued from the National Press, at the head of which it was stated that the writer was "a member of the high clergy residing in Rome." This was also an address to the Romans on the part reserved to them in the ultimate working-out that great revolution which was to prove the "*synthesis between religion and nationality*."

The fervour, the eloquence, the deep earnestness, and striking force of its language made the publication produce a more than ordinary effect. It penetrated into the convents; and friars, in reading those pages where the doctrine of national right was expounded in forms of argument congenial to the scholastic forms of thought, felt a pinch at their hearts. From that time, Friar Giusto relapsed into silence—until this crowning hour, when again he has addressed the Romans, although this time only in a broadsheet, which, like the former pamphlet, has appended to it an official indorsement in significant Italics, wherein he is called a "high dignitary of the Roman clergy." In magnificent diction,

the Friar calls on his immediate countrymen to be mindful of the necessity not to allow themselves to be misled by wolves in sheep's clothing into premature and inevitably injurious action, because necessarily destructive of that harmonious settlement side by side in Italy of the supreme Pontiff and the supreme Head of the Italian State, which he contemplates as the great result of the present process of transformation. From the height of a grand historical survey, this monk with a tongue tipped with an eloquence that at moments bursts into quite Demosthenic flight—as when, in alluding to the Pope's announced intention to leave Rome, he exclaims that this will not happen, because "Christ has declared solemnly that flight was of the hireling, not of the shepherd, to whom the fold was really intrusted"—appeals to the intelligence and conscious dignity of a population that has never lost a sense of pride in its attribute as Roman. As we have said, the Englishman may be at a loss to seize the practical point of a manifesto which dwells on the terms of synthesis and analysis, but in Rome, and especially among those sections of the Italian clergy most likely to co-operate in conciliation, such language will be understood. There is, however, a certain lay element in Rome which it cannot be supposed will be content with such general and rather abstract views at this moment, an element more disposed to look about for concrete measures and active operations, than subtle speculations. This element, however conservative in other sympathies, would yet concur at first with the party of action in so far that it would be indisposed to remain perfectly quiet, but rather seek to extort from the Government some positive concessions. This view has been propounded in a pamphlet entitled, *The Senate of Rome and the Pope*, distributed clandestinely to a large extent in Rome. Upon the title-page stands, "*In Ædibus Maximis Romæ*," but we believe this superscription to be as counterfeit as the signature at the end—"Stefano Porcari." The pamphlet was printed out of Rome, and without the connivance of the Roman Committee. The intention of the brochure is to draw attention to the historical antecedents of the municipality identified with the Capitol, and to engage the Romans to revive it in its ancient prerogatives, as an instrument towards bridging over the gulf between the state of things that exists and that state of things which Italian unitarians look to. So far there is nothing to object to this publi-

cation. But at the end it contains a direct invitation to the Romans to proceed to the Capitol the day after the last French soldier has left, and there, in the face of Europe, reconstitute of their own authority the old historical *commune* which so often had waged war on, defied, and driven away Popes. Now, in this proposition there lies most undoubtedly, however overlaid with historical precedents, a direct revolutionary suggestion, the execution whereof would almost unavoidably precipitate a clash. In spite therefore of the many excellent points in this pamphlet, we believe that the Roman Committee declined to authorize its diffusion, on the ground that its concluding recommendations constituted an objectionable appeal. Nevertheless, the pamphlet was diffused all over Rome by some clandestine machinery, which on this occasion worked with as much rapidity and effectiveness as the one ordinarily set in motion by the recognized Committee, a circumstance which gives much to think of. If what we have been told is true, then it is impossible to doubt that a second secret organization exists in Rome outside the acknowledged Committee, which represents the more advanced and impatient section, and which, to judge from this specimen, might at a given moment be in a position to attempt a *coup de main* on its own impulse. At all events, we think ourselves not mistaken when we affirm that the distribution of this pamphlet was the work of hands not acting for the Committee, which was averse to its publication, so that here there would be something that might at a late moment lead to a practical disruption of the Liberal party in Rome into two organized sections, working on different plans, and towards distinct ends.

These three publications may, therefore, be taken to represent very adequately the elements at this moment pervading Rome, and certain to have to be taken into account in any calculations of what is going to happen there. In the first, we have the guarded and even officially frigid language of a body which, although of illegitimate authority, is already plainly anxious to discountenance a revolutionary style. This clandestine organization issues vapid generalizations couched in language of official decorum to a population palpitating with excitement. In the second, we have the deep-felt utterings of one who speaks at once as patriot and as ecclesiastical reformer, dropping words of fire, such as are precisely calculated to touch men to the quick in a situation where the two elements, the spirit-

ual and the secular, the ecclesiastic and the layman, lie inextricably locked together. It is Rome in its anomalous and two-headed nature that is here addressed, and which will feel the voice that so cries to it, while the purely lay Rome, which is both large in numbers and of a spirit fed with rather turbulent thoughts, and keen for making war on priests, will be little disposed to hearken kindly to any subtle speculation of this nature, but, on the contrary, will be quick to embrace those practical suggestions of a Stefano Porcari, which seem to open the way for active operations against a hated *régime*. Which will gain the ascendant of the two elements, — the more comprehensive and subtle one, which would effect a world-revolution; or that rougher but readier one, which would deal with the Pope and Rome as they have so often been dealt with in the turbulent period of the Middle Ages? That is the question of the hour, a question pregnant with consequences, but which no one can answer as yet.

From the Saturday Review, Dec. 29.

COUNT BISMARCK.

WHETHER by accident or design, a selection from Count BISMARCK's political correspondence has appeared at the very moment when he has seized an opportunity of justifying his policy in a speech to the Prussian Parliament. Count BISMARCK is frankness itself, and from these two sources we gain a very clear and full notion of what he has been aiming at for years, and of the degree in which his aims have been realized. What he has written, and what he has said, inspire us with the highest notion of his ability, of his self-reliance, and of his patriotism. We may also add, that he has had no scruples whatever, and has gone direct to his goal without any wavering or any remorse. But he alone saw what Prussia and Germany wanted, and how it was to be got. Under colour of being a rather fanciful Conservative, he was bent on bringing about the most startling changes; and, if he has made the Prussian people bow to his will, he has twisted and turned the KING and the aristocracy quite as freely. For many years he has known exactly what he wanted. He was bent on doing three things, and he has done them. He has crushed out the independence of the minor sovereigns;

he has thrust Austria out of Germany; and he has made Prussia a great compact military Power. His hatred of the Diet was only exceeded by his hatred of Austria. He considered that Prussia had allowed herself in 1815 to be placed in a thoroughly wrong position, and that she had not so used the advantage which the Zollverein gave her as to retrieve the mistake. She had permitted herself to be included as a humble member in a Federation where she was thwarted by all the little potentates whom she could have eaten up in a moment, and where she was forever being bullied by Austria. The first practical step for bettering the position of Prussia was, he thought, to change the character of the Zollverein. A commercial union in which Prussia had to consult the whims of nearly thirty little princes was an absurdity, but a commercial union in which Prussia should show these little princes how comfortable it was to be dictated to and managed by Prussia would be a most useful arrangement. But then the princes might naturally object to such an arrangement. Count BISMARCK was equal to the occasion, and with a cynical good-nature explained how they were to be won over. They were simply to be bribed. They were to have a larger revenue secured them in the Zollverein than they could get outside it. Plenty of loaves and fishes — this was his recipe for winning over these princes, who seriously believed themselves among the greatest of earthly beings, and would have been much surprised to hear how a Prussian nobleman of very inferior rank and position proposed to manage them. But managing them was only a secondary object of Count BISMARCK's policy. They were but minor nuisances, and the arch-nuisance was Austria. The engagement which the KING entered into at Toplitz to support Austria, if attacked in Lombardy, was very painful to the mind of the Prussian patriot. It encouraged Austria in that "impassioned fidgetiness" which Count BISMARCK considered the mark of her policy, and which showed itself in irritating and vexing the Italians whenever she dared. We hope these candid expressions will fall under the eyes of FRANCIS JOSEPH, and that the unhappy EMPEROR will learn a lesson from thinking what his impassioned fidgetiness has brought him to.

At last the day came when Count BISMARCK was at the head of Prussian affairs, and could begin to make his dreams a reality. The affair of the Duchies gave him the desired opening, and he set himself resolutely to get all he could out of them. It was a

very good thing that there should be a noise about them. Anything was better than silence, and it was especially useful — as he expressed himself, with an irreverent allusion, we fear, to Lord RUSSELL — that foreign dogs should bark about Holstein. It taught the world to believe that a good yelping in all kinds of notes about the Duchies was the natural thing, and amidst the noise the special bark of Prussia might make itself heard. Count BISMARCK talks of what he did and thought and planned two years ago in exactly the same calm, indifferent, historical vein in which NAPOLEON at St. Helena dictated what he wished to be thought his reminiscences of a career that was closed for ever. He was, he tells us, for getting all that he could; a little, if he could only get a little, and a great deal, if a great deal was to be had. If he possibly could, he would annex the Duchies to Prussia; if that was impossible, he would set up an independent prince there under Prussian control; if even this was denied him, he would at any rate free the inhabitants from subjection to the Danish Parliament. At one time it seemed to him that the Duke of AUGUSTENBURG would be the best card; but the Duke disappointed him. He was very ill-tempered and very sulky, and when Count BISMARCK, on a fine summer's evening, and in the very pleasantest manner, merely asked him to give Prussia a port in the Duchies, he had the impudence to refuse. There was no dealing with such a man. The fact was, says Count BISMARCK, as if he were speaking of FAUST having sold himself to the Devil, the Duke was an Austrian at heart, and so there was nothing to be done with him. It is agreeable to think of the outward sign that was given to the world of this final resolve, and to remember that it was then stated, with an air of solemn farce that has never been beaten in France, that the Prussian lawyers, after having spent months in examining the DUKE's title, had at length found it to be utterly worthless. But all this was, in a manner, ancient and forgotten history to the Prussian Chamber which Count BISMARCK was addressing, and which was chiefly anxious to know how it happened that in the Treaty of Nikolsburg, Prussia had agreed that the inhabitants of North Schleswig should choose whether they would go back to Denmark or not. Count BISMARCK is no more afraid to tell the truth about events that happened four months ago than about events that happened four years ago. This, he calmly informed his hearers, was the doing of France. This voting of

the North Schleswigers was a French crotchet, and it was to be expected that, if France intervened at all, she would ask that some attention should be paid to this fancy. It was not what Count BISMARCK quite liked, but it would have been absurd to go to war with France about it. And, after all, the crotchet was a tolerably harmless one. The treaty said that these Schleswigers were to vote, but it did not say how or when they were to vote. "I shall take care," added the Count, "that they do not vote until they are certain to vote quite 'impartially.'" The last trace of sympathy with the Evil One at Vienna, and with the minor AUGUSTENBURG Devil, must be eradicated out of their hearts, and then, in their purified and regenerate state, they shall be asked whether they really wish to cease to be Prussian.

What we specially like and admire in Count BISMARCK is that, with the one exception of Austria, whom he hates as he does sin (and we may be sure he does hate sin, for the Count is a pious man, and thanks God very properly, in one of his letters, for having guided him in all his little plans aright), he can see the bad and good in everything, and is never one-sided or unjust. He scouted with the deepest indignation the accusation that he once was party to a project for yielding German territory to France; but he speaks very kindly of France too, and says that the EMPEROR at least, who may be wiser than his subjects, sees that the rise of Prussia is a very good thing for France, and that it is much better for France to have as a neighbour a Power consisting of under forty millions of men, instead of a Power like the old Bund, which included Austria, and had, rather nominally perhaps, over seventy millions at its command. In the same way, although Count BISMARCK has been such a good friend to his King, and such an excellent servant to his master, he has no kind of reverence for the King of PRUSSIA's favourite beliefs. If there is one thing that the KING believes in more than another, it is in the claims of legitimacy and the Divine right of princes. It has gone to his heart to trample even on the little sovereigns he has beaten, and to plunder the princes whose territories he absolutely required. But Count BISMARCK has no patience with such nonsense. He uses the most awful language on the subject, and characterizes the whole system on which the pretensions of the minor German sovereigns are based as a swindle. They are all cheats, with their fiction of Divine right, and their silly playing at being kings under the shelter of Prussia. It is by the

grace of Prussia, not by the grace of God, that they rule, and the sooner this is brought home to them the better. So wrote Count BISMARCK five years ago, and we may be sure he does not think otherwise now. And as for home politics, although he is content to be called a Conservative, and although it is in the columns of the *Kreuz Zeitung* that his letters have been published, he speaks as freely of the Conservatives as of other people. He laughs at their foolish little attacks on an imaginary German Republic, and reminds them that to lead the world they must have positive aims and an active policy, and not rest satisfied with the impotent delight of constantly repeating grand negative sentiments. He cannot conceive why the Prussian Conservatives should be frightened at having a representative assembly for the direction of German affairs. The common Conservative talk is evidently, to his mind, a pure sham. The Conservatives are not believers in their own creed. They do not really wish to see the doctrine of divine right carried to its legitimate conclusion; they do not really wish Prussia to be without a Constitution and a Parliament. "If you are to have these things," says Count BISMARCK, "recognise that you are to have them. Do not be silly enough to speak as if Constitutions and Parliaments do not, and ought not, to exist; treat them as existing, and turn them to your own purposes." "We might create a Conservative common Parliament, and be thanked for it even by the Liberals." Thus he wrote some time ago, and the scheme he has just revealed for the constitution of the new Parliament of North Germany looks as if he were fully bent on carrying out practically his old views. It will be a Conservative Parliament, but the Liberals may not be unthankful for it; and whomsoever it pleases or displeases, it will assuredly not last long unless it fulfils its primary aim, and increases the power of Prussia.

From the Examiner, Dec. 29.

RICASOLI AND BISMARCK.

THE year closes with two of the most remarkable confessions of political faith uttered in our time. The Chief Ministers of New Italy and New Germany cast off reserve, and appeal, in stirring words, to the good sense and good feeling of their re-

spective countrymen to ratify and realize the perilous but splendid policy they fore-show. The States of Italy have taken the Lord of Piedmont for their King, have agreed to a united Parliament, and have now to settle the not less difficult question of the relation between Church and State. The States of Northern and Central Germany, having got over their religious troubles long ago, and having lately concurred in accepting the Prussian Sovereign for their common King in affairs of trade and war, have still to work out the experiment of a national legislature, which is, in Count Bismarck's words, to consist of a "Confederate Council" and a "Zollverein Parliament." We do not pretend to say that we thoroughly comprehend the vision of either Premier; and we somewhat doubt if either fully understands it himself.

Cavour, among his political bequests, left a promise of undying fame to whichever of his successors should develop his idea of a free Church in a free State; but what precisely was meant by that elastic phrase nobody, as far as we know, has been able to explain. That Baron Ricasoli thinks he understands the pressing want of his countrymen, and how to supply it, we fully believe; but that is not quite the same thing as feeling certain that he will continue to see his way after the first steps are taken, and he has committed himself to concessions hard to recall. Hitherto, if the Church has been hostile, at least the mind of the State has been clear and its way plain. All that was vigorous, sound, and enlightened in public opinion was at one with the Government in breaking to pieces the priestly thralldom in which, for purposes partly political and partly professional, the disfranchised and disinherited Italians were for centuries held. The law sequestrating the surplus wealth of the monasteries put the finishing stroke to the work of ecclesiastical emancipation everywhere save in Rome; and now that the foreign guards of the Vatican are gone, it can be but a question of time — and that a short time — when the Chief Priests there shall be called upon for an account of their temporal stewardship, forasmuch as they may be no longer stewards. The power of the Church to torture and to tyrannize is so thoroughly broken and humbled that men can no longer be persuaded that it is not actually dead; and that is precisely where the danger lies. Ricasoli himself is not insensible to the peril of letting the bishops come back without covenant or condition to their Episcopal palaces and the enjoyment of their Episcopal rank and revenue, liable as

these are to be abused towards the insidious undoing of the newly-established States. In the eyes of the philosophic statesman all religions are entitled to equal toleration and respect. Enmity to Catholicism he has none; faith in its exclusive efficacy to humanize, or elevate, or save, he has none either. The exigencies of his position, entangled with the French Convention of 1864, and conscious that the peace of Italy is not worth a month's purchase if the Pope quit Rome, he sees no choice but to dare all things and plunge into a sea of troubles, if peradventure by boldly breasting he may end them. So he bids the bishops back without bargain, or bond, or any such thing, and preaches them a sermon the like of which they never heard before, and the admonitions of which, should they disregard, they will never have a chance of hearing again. It is the last time of asking. The Italian Premier does not use the ominous words, but the implication rings in every eloquent period and patriotic phrase. The disaffected prelates, when asking permission to resume their sees, had pointed to the status of the Catholic Church in America as though they would be satisfied therewith. The outspoken Baron reminds them that "in the United States every citizen is free to follow the belief which he thinks best, and to worship the Divinity in the form that may seem to him most fitting; that side by side with the Roman clergy officiate the Genevan Consistory and the Methodist Assembly;" that "this state of things causes neither confusion nor discord, because no religion claims special protection or privileges from the State; each exists, develops itself, and is exercised under the protection of the impartial law; and the law, equally respected by all, guarantees equal liberty to all." This is Protestantism — Protestantism a thousand times purer, loftier, and truer than that of Exeter Hall: for this is the enunciation, in winged words, of the inherent and inalienable right of private judgment which every bigot, of every sect, from Calvin to Wesley and from Wesley to Pusey, hates and would destroy. This from the Minister of the King of Italy is the announcement that the principles of the Reformation have at length gained ascendancy in the Peninsula; and Baron Ricasoli is right in believing that, if they have taken sufficient root in the soil, the temporal pretensions and ecclesiastical plots of the Vatican are no longer formidable to the State.

The Prussian Minister, with equal courage and candour, sets himself to a different but scarcely less difficult task. He too feels

that the day for disguise is gone by, and that the only chance of success from his venturous policy lies in its open avowal and in the response which that avowal may evoke from public opinion. At the moment when his ground plan of a German Parliament is given to the world, its fearless author allows the *Kreuz Zeitung* to publish a series of his confidential letters from St. Petersburg when he was Envoy there. In these the darling dream of German unity is disclosed, and all sorts of means, crooked and straight, honest and cunning, violent and plausible, are discussed with matchless *sang froid* for the accomplishment of the great aim. Truly, as he says himself in one of these nude revelations of plans and motives, he is "a man of no principle—only of a settled purpose." The purpose was, and is, out of a vulnerable Prussia and half a score of indefensible Principalities to make an invincible State. The misgivings of Royalty (now no secret), the prejudices of the nobles, which he laughs at as insane, and the fantastic theories of the democrats, which he evidently regards as no more than political toys, harmless while they amuse, and to be summarily swept away when troublesome,—all, in his view, are capable of being used in turn, and truly he has found the way to use them with a vengeance. Inimitable is the sardonic air of triumph with which he quotes a letter of his own, written in the height of the popular rage against him for insisting on an irresponsible War Budget, and in which letter he had coolly foretold that the day would come when he should be the most popular man in Prussia. The day is certainly at hand, if it be not already come. But the trial of the Minister's policy is still before him. He is about to call before him two assemblies—the one consisting, like the superseded Bund, of the representatives of Kings and Princes exercising powers as disproportionate to one another as the princely houses which are to nominate them. The other is to be a House of Commons, chosen by universal or, more properly speaking, household and handicraft suffrage. How will these two bodies work together, and how long? The pen of Count Bismarck has deliberately pricked the bubble of Divine Right which two years ago he stood by to see his Royal master blow, and watched sailing over men's wondering heads with all the gravity of a believer in its durability. It served its turn and is gone. That of the Junker party has shared a similar fate. Till yesterday he was their idol, or rather their saviour, who would keep down the devil of democracy

for them, and organize, pay, drill, and send to battle great armies, in spite of the votes of a middle-class Parliament. All this he undertook to do, and he did it. But in the hour of victory the great truth stared him in the face, that the nationhood he had devised and fabricated was and could be nothing unless he could call up a nation to put it on. This too he has done, well knowing that the deed is irrevocable.

From the London Review, Dec. 29.

COUNT BISMARCK ON PRUSSIAN POLICY.

THE *Kreuz Zeitung* has just published a series of private letters from Count Bismarck written between the years 1856 and 1864. Although their interest is now purely historical, they bear so closely upon the character and the policy of this statesman, that they are worthy of far more attention than we should ordinarily give to documents of the kind. Although Count Bismarck entered office as a Conservative, and was usually considered as a member of that party, it is clear that for the last eight or ten years at any rate his objects and principles were very different from theirs. While their leading notion was that of upholding the *status quo* in Germany, and of maintaining above everything else the right divine of sovereigns, his great aim was the unification of Germany, or, at any rate, the aggrandizement of Prussia. He was not a Liberal, because he had not, nor do we believe that he now has, the slightest sympathy with popular rights or the slightest attachment to constitutional government for its own sake. It was necessary for him even to figure as an anti-Liberal for a time, because the Prussian Parliament set themselves against the plan of military organization which he deemed necessary for the successful execution of his ultimate designs; and because it was necessary, in order to his success, that he should keep the direction of foreign affairs in his own hands to an extent which would have been impossible had he permitted the Chambers to exercise the slightest control over them. But in his heart he felt, and in these letters he expresses, the utmost scorn for the petty princes who lorded it over their own subjects, and whose existence doomed Germany to permanent weakness and derision. He saw clearly, and said plainly to his

correspondent, that it was absurd for Prussia to set herself up as the champion of the principle of legitimacy all the world over, when it had been discarded by every nation outside Germany. Such a course in his opinion only tended to disable the King and his Government from fulfilling their first duty of securing Prussia against wrongs from within and without. If it were carried out to the full extent, it would entail the necessity of "applauding the hallucinations of the petty princes who, supposing that they are powers, avail themselves of the pedestal of our own might to play at kings." "And yet," as he adds with a characteristic frankness and bluntness of expression, which we should spoil by paraphrasing, "all this swindle is unauthorized by the history of the past, is quite new, unhistorical, and equally opposed to the teachings of God as to the rights of mankind." So long ago as 1861 we find him blaming the conduct of the Conservative party in declaring against the German republic. No party, he reminded them, could be always on the defensive, and he strongly urged that they should then take up the subject of Federal Reform in a vigorous and practical spirit. He was even at that time willing to assent to the creation of a Federal representative assembly, for, as he observed with great point, he could see no reason why the Conservatives should object to such a body as a part of the Government of Germany, although they would be unwilling to dispense with it as a portion of the Prussian Constitution. In point of fact, although he had no love of constitutionalism, he had no fear of it; he was willing to use it or any other means to accomplish his main object; and he saw clearly enough that it was only by invoking the action of the people in some form or other that he could surmount the selfish opposition of minor sovereigns. Upon that conviction he is acting now, as may be seen from the influential place assigned to a representative chosen by a very popular suffrage, in the new North German constitution; and it certainly gives us universal confidence in his sincerity when we find that he held the language we have quoted in a private correspondence which took place more than six years ago. Towards Austria his hostility, and something like contempt, are freely expressed in these letters; and it is also plain from these, that whatever might have been the views of other Prussian statesmen, Count Bismarck never contemplated the erection of Slesvig-Holstein into a separate principality. To him it ap-

peared nothing short of an absurdity that Prussia should incur the risk and the expense of a war for the purpose of adding another to the little States which distracted the councils of Germany, and afforded a constant opening for foreign intervention. He saw, in the agitation to which the subject gave rise, an opportunity for aggrandizing his own country; and if he could turn it to account he was quite prepared to avail himself of it. But, as he explained the other day to the Chamber of Deputies, he regarded the Duke of Augustenburg as neither more nor less than an ally of Austria, and was fully determined that he should never ascend the throne to which he aspired until he had acceded to such terms as would virtually render him a vassal of Prussia. Throughout the whole series of transactions which culminated in the Peace of Nikolsburg, it is evident that he looked upon the Duchies as mere pawns in the great game that he was playing, and that in every move he made, he kept steadily before his eyes the great object of building up a strong and independent Germany, from which Austria should be excluded. Looking back upon these events by the light of our present knowledge, it is impossible not to regard with admiration the clearness of reason, the tenacity of purpose, and the ready adaptation of means to ends which he displayed; and while we cannot help condemning many things which he did, we must admit that never was a statesman more entitled to regard a great triumph as in the most emphatic sense his own work.

We regret to find, from the speech to which we have already alluded, and from the debate in the Prussian Chambers on the union of Slesvig-Holstein with Prussia, that there is but little prospect of the cession of Northern Slesvig to Denmark. With his usual frankness, Count Bismarck explained the reason why he consented to insert in the treaty of peace a stipulation that the people of that province should be permitted to decide by a vote whether they would return to Denmark or would continue under Prussian rule. As every one believed at the time, this was done simply in deference to France, as a sort of solace to the Emperor Napoleon, under the heavy mortification which the result of the campaign had entailed upon him, and as a necessary condition of patching up a peace which might secure to Prussia all that she had won, if not all that she desired to attain. To use the words of the Minister — "No one could expect us to carry on two

wars at the same time. Peace with Austria had not been concluded; were we to imperil the fruits of our glorious campaign by plunging into hostilities with a new, a second enemy? No one can question the prudence of the decision; all we desire is that it should be carried out in good faith. That, however, seems more than doubtful; for, although Count Bismarck told the deputies that he was always of opinion that people who have no wish to be Prussians, and who cannot be expected to alter their opinions on this head—people who declare themselves to be nationally connected with a neighbouring State—do not add to the power of the State from which they wish to separate, he went on to point out that the treaty is so vaguely worded as to allow Prussia a certain latitude in carrying it out. Now, it certainly is not calculated to give us much confidence in the honour or honesty of a party to an obligation when we find him taking credit for having drawn it up in such a way as to admit of evasion. Still less when that is followed up by the declaration that “we shall so act that the votes to be given by the people of North Slesvig, the issue of which is to be the basis of our future action, shall be the indubitable expression of the uninfluenced and definitive will of those voting.” Can any one who recollects that Slesvig is at present governed by Prussian officials, who exercise the most despotic authority, doubt what this means? The only interpretation we can place upon it is, that the voting is to be put off until the voters have been seduced or coerced into the mood most favourable to the Power at whose mercy they are; that then, but not until then, the farce of a *plebiscitum* is to be gone through; and the fraud is thus to be worked as a sanction for the annexation which force has already effected. It is impossible to denounce in too strong terms the infamy of such a transaction; but we cannot say that it takes us by surprise. Throughout the whole of the Slesvig-Holstein business the Germans have shown a grasping, unscrupulous greed of territory, and a perfect insensibility to anything but the promptings of their own ambition, which has quite prepared us for any amount of disregard of good faith, honour, or justice. After all that has occurred, it is nothing more than might be expected, that with the article of the Treaty of Nikolsburg staring them in the face, the Prussian Chamber should vote the union to their own country by a majority of 300 to 30. But

although they have postponed, *sine die*, the fulfilment of an engagement solemnly contracted for a no less valid consideration than the acquiescence of France in their German annexations, they will do well to remember the warning of Count Bismarck, that “the Government cannot be released by Parliament from obligations legitimately entered into, and already sanctioned by the House.” They may put off the disagreeable day as long as they please; they may even do all that in them lies to shuffle out of their bargain, but after all they must in the end reckon with the Emperor Napoleon. No doubt they think that he will never go to war for so small a matter as this, and we dare say that they are confident in their own power to hold their ground against him even if he did. But for all that, it is imprudent, to say the least of it, to leave a possible *casus belli* open between themselves and the ruler of France. It is all very well for Count Bismarck to argue at Berlin that France has rather gained than lost by the increase of Prussia and the exclusion of Austria from Germany. But he must be quite aware that that is not the way in which the subject is regarded either by the French people or by their Sovereign. Both feel sorely the loss of weight and influence which they have sustained by changes which close Germany against their intrigues, and render infinitely difficult the acquisition of the Rhine frontier. The Emperor cannot be insensible to the loss of *prestige* he has incurred by allowing this to take place, after he had expressly declared that nothing of the sort must happen without France receiving a territorial compensation. Under these circumstances, it is in the highest degree foolish to add insult to injury, by shamelessly violating a pledge like that in respect to North Slesvig. Although it is impossible to say how or when such outrage may be resented, it will assuredly not be forgotten, and will most likely in the end, if not just now, entail a just punishment. Moreover, even in this hour of their pride and their legitimate self-confidence, the Germans would do well to remember that the public opinion of Europe has not wholly lost its influence and power. To a nation however strong, character is of some value; and it is scarcely worth while to forget the respect and to excite the disgust of other countries for the sake of acquiring, by flagrant fraud, a few additional square miles of territory inhabited by an alien population.